The Business Journal of Vegetation Management December 1978/$1.25

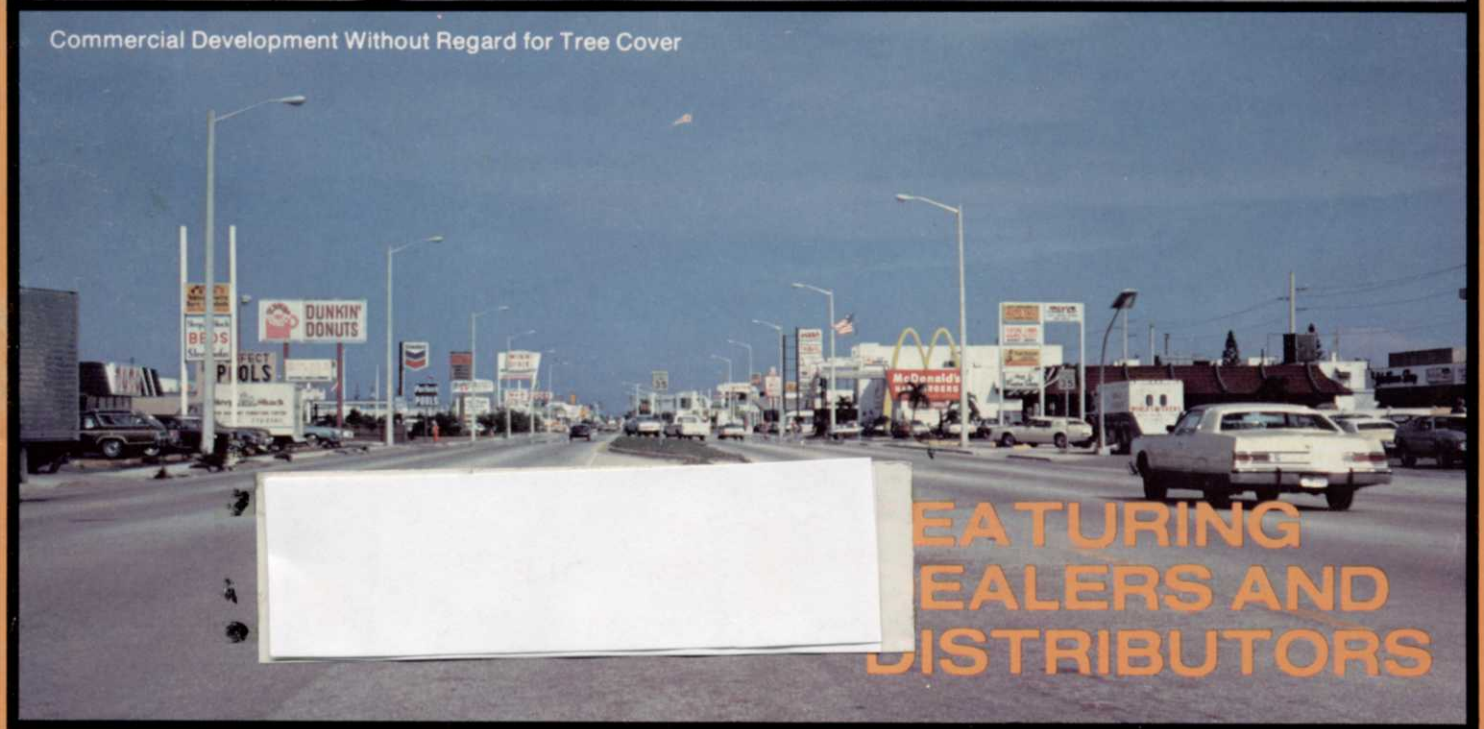
WEEDS TREES & TURF

Restoring Fort Lauderdale's Tree Canopy

Grasses With High Tolerance to Road Salt

1978 Article and Author Index

Older Fort Lauderdale With Tree-Lined Boulevards



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CONTENTS

DECEMBER 1978/VOL. 17, NO. 12

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Viewpoint 6

Landscape Contractor News 12

Government News 14

GREEN INDUSTRY NEWS

GCSAA 50th Conference and Show Set for Atlanta . . . Sport Foundation Names Five Award Winning Parks . . . Florida and Virginia Turf Shows Draw Large Attendance . . . Jacobsen Hunts for Old Greens Kings

FEATURES

Fort Lauderdale's Plan to Restore Tree Canopy

Dan Mackey provides an in-depth look of Fort Lauderdale's effort to bring back native and blight resistant trees where commercial development and poor planning let them fade away. 16

PROFILE OF DEALERS AND DISTRIBUTORS

A look at the people supplying the many users of turf and tree products. Also, survey results show the turf market stands up to agriculture when it come to growth potential. 23

Grasses Exhibiting High Tolerance to Road Salt

This feature explains how road salt damages turf along highways and how certain grasses can withstand high salt concentration in the soil. 31

1978 Author and Article Index

The easy way to find helpful articles published this year. 34

Vegetation Management 42

Proscape 44

Classifieds 46

Events 50

Advertiser Information 50

Cover: Photos taken by Dan Mackey, author of article on Restoring Fort Lauderdale's Tree Canopy

VIEWPOINT

Bruce F. Shank, Editor

Recession, recession, recession. I wish all I had to worry about was a flattening of the gross national product. People are obsessed with bad news, tragedy, and soap operas. 1978 was too good to last. We can't stand to have two good years in a row.

And why may we have a recession? Because we are greedy, selfish, and thought-less? The proposed solution, why, of course, control our wages and prices. That ought to do it.

I suggest that if there were a precise way to measure cost increases caused directly or indirectly by government regulation, we might have a more correct indication of why prices are inflating at a faster than normal rate.

The United States has always promised opportunity to its citizens. To achieve that promise is not greed. Most of us have a sense of moderation and concern for our customers. The more we take the more our customers pay, and they'll pay only so much since competition exists.

Anyone who enjoys dwelling on negatives should come to Cleveland. There is plenty to fuss and worry about. But people still go to work and businesses still open every morning. People here refuse to let politicians ruin plans or disrupt business operations. Fortunately, local government has left the business community alone.

I suggest the Federal government do the same. Leave prices and wages alone and pay attention to its own costs. Good places to start would be the Environmental Protection Agency and the Labor Department. The inflation caused by these two organizations is probably more to blame than any other factor in a possible recession.

1978 has been a good year for the Green Industry and 1979 will be just as good. Go forward with plans the same way you did this year. Just keep control of inventories and productivity. These are things we should all watch anyway.

The staff of Weeds Trees & Turf thanks you for subscribing to our magazine and wishes you a very enjoyable holiday season. We too have plans for 1979, and we don't intend to cut back because someone whispered recession.

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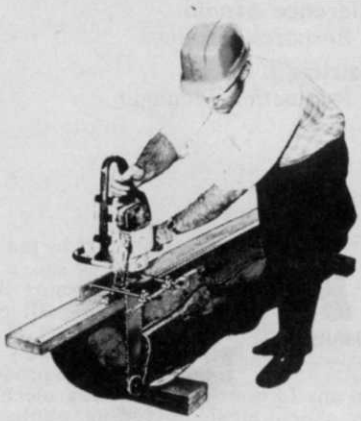

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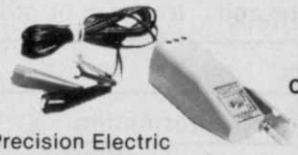

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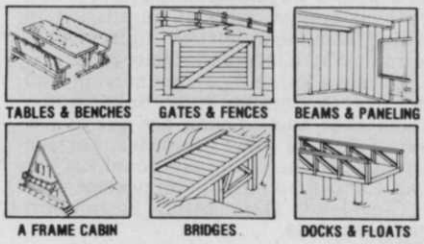

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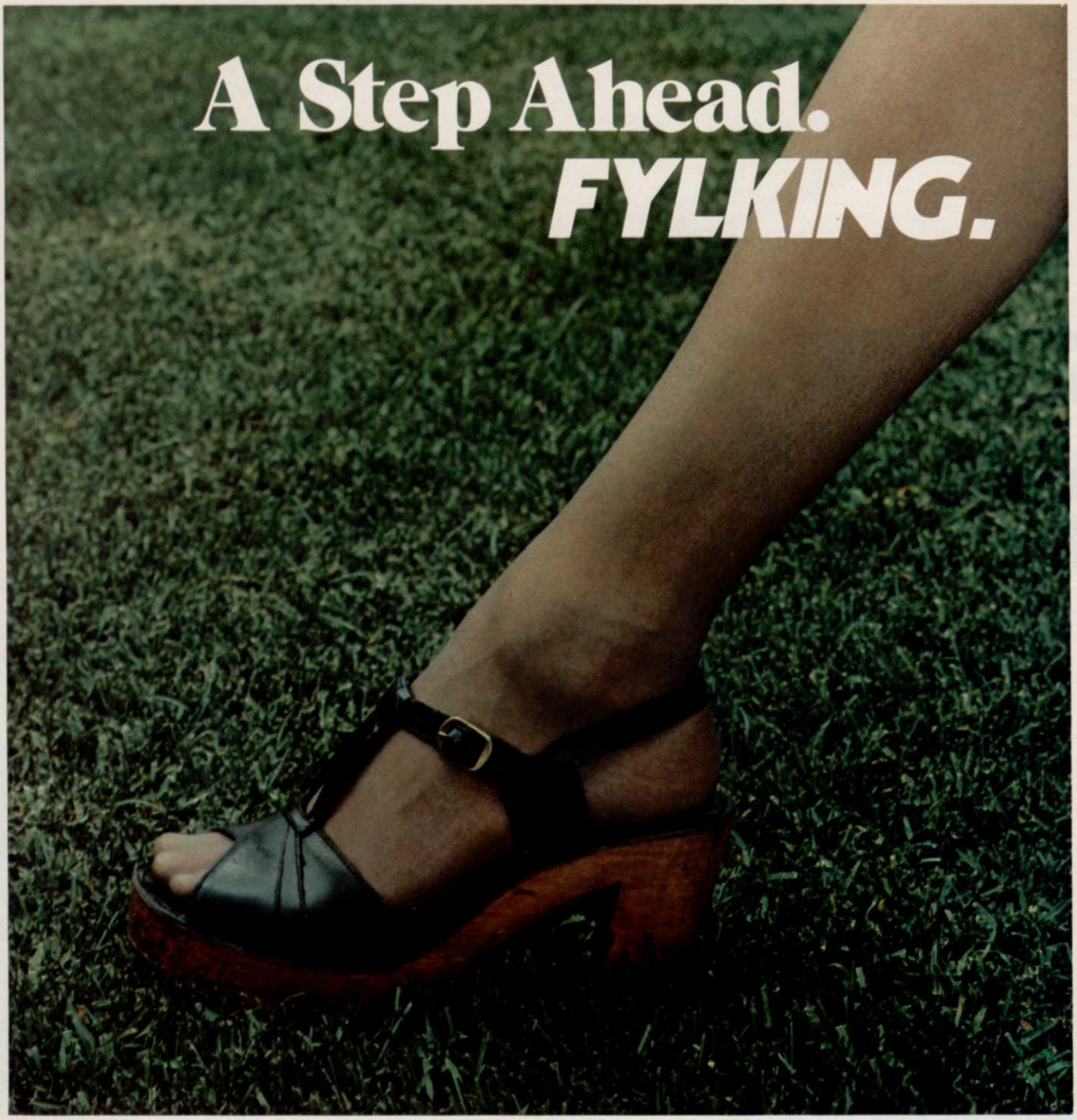

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GREEN INDUSTRY NEWS

PARKS & RECREATION

Sports Foundation honors five parks

Historic preservation projects, a frisbee/disc golf course, and a skateboard park are just a few of the special programs administered by five park and recreation departments recently honored as Grand Award Winners in the National Gold Medal Awards program sponsored by The Sports Foundation, Inc. recognizing excellence in park and recreation management.

The five winners in their respective population class are:

Class I (over 250,000) — San Jose (California) Parks and Recreation Department

Class II (from 100,000 to 250,000) — City of Anaheim (California) Parks, Recreation and the Arts Department

Class III (from 50,000 to 100,000) — Mesa (Arizona) Parks and Recreation Department

Class IV (from 20,000 to 50,000) — Wilmette (Illinois) Park District

Class V (under 20,000) — Wheeling (Illinois) Park District.

The director of each department was awarded a plaque and a gift of $1,000 for the implementation of a worthy park project. The presentation was made as part of the 1978 National Recreation & Parks Association (NRPA) Congress for Recreation and Parks at the Miami Beach Convention Center in Miami, Florida.

Directors from the five park and recreaton departments honored as Grand Award Winners in the 1978 Gold Medal Awards program sponsored by The Sports Foundtion Inc. for excellence in park and recreation management are (l. to r.): Gene Saalwaechter, City of San Jose Parks & Recreation Dept., San Jose, CA; James D. Ruth, Anaheim Parks, Recreation & Arts Dept., Anaheim, CA; Maurice B. Bateman, Mesa Parks & Recreation, Mesa, AZ; Raymond VanDeWalle, Wilmette Park District, Wilmette, IL; and David F. Phillips, Wheeling Park District, Wheeling, IL. Each department was awarded a plaque and a gift of $1,000 for the implementation of a worthy park project. The presentation was made as part of the 1978 NRPA Congress for Recreation and Parks at the Miami Beach Convention Center in Miami, FL.

The Sports Foundation annually judges park and recreation departments on the basis of improvement, service, continuing development, extent of future planning and degree of participant involvement and acceptance as determined by local needs for the respective park and recreation department program.

Judges for the 1978 Gold Medal Awards were nationally recognized authorities in the field of park and recreation management. The judges included: Dr. Jackson M. Anderson, Coordinator of Graduate Study, Central Michigan University, Mount Pleasant, Michigan; Robert M. Artz, Director and General Manager of Simi Calley Recreation and Park District, Simi Valley, California; Ted B. Fleckinger, Director of the Great Lakes Region, National Recreation and Parks Association, Des Plaines, Illinois; and Ralph C. Wilson, Chief Recreation Specialist, Department of Agriculture, Washington, D.C.

The Sports Foundation, Inc., is a non-profit membership organization founded to stimulate interest and participation in sports-related activities. The Foundation established the Gold Medal Awards for park and recreation management in 1966.

Three brand new Greens King IIs like the one on the left will be awarded to owners of the three oldest Greens Kings, to celebrate the 10th anniversary of the popular machine. Jacobsen Turf Products will screen serial numbers and dates of purchase for the earliest; then the company's distributors will verify the information and usage. The lucky owners will be announced at special ceremonies at the 50th Annual Turfgrass Conference & Show, Feb. 4-9, in Atlanta, Ga.

GOLF

Superintendents set for 50th conference

The 50th International Turfgrass Conference and Show of the Golf Course Superintendents Association of America is ready to start in Atlanta, Feb. 4-9.

Besides the usual five days of exhibits and educational sessions, there will be two days of preconference seminars in subjects ranging from landscape principles to cardiopulmonary resuscitation.

◀ For ad on preceding page circle **129** on free information card

Landscape Contractor News

Council releases profile of customers

The Nursery Marketing Council has released data obtained from research of nursery customers.

The information reveals three different types of customers. The first type, which makes up an estimated 20 percent of homeowners, spends seven hours per week in the summer caring for their plants and an average of $200 per year for plant materials. The other two groups spend about four hours per week in the summer caring for plants and spend $40 to $70 per year for plant material.

NMC also found that 25 percent of homeowners look to their local garden center for information on plants and 60 percent depend upon nurseries. Also, mail order plant catalogs are used by only one percent of homeowners.

ALCA urges compliance to Carter guidelines

The Associated Landscape Contractors of America have suggested that contractors, especially those working under government contracts, comply with new wage and price guidelines. Compliance must be documented by contractors and subcontractors. Certificates of compliance are required for government jobs for more than $5 million. Other penalty situations are unclear.

Basically, prices should not rise an average of ½ percent less than the average price increase of 1976 and 1977. A ceiling of 9.5 percent exists for price increases. Wages should not increase more than an average of seven percent.

Houston is location of ALCA annual meeting

Final program details have been released for the 1979 Annual Meeting & Trade Exhibit of the Associated Landscape Contractors of America. The week-long meeting will be held Feb. 4-9, 1979, at the Galleria Plaza Hotel in Houston, Texas.

The ALCA convention will feature some twelve programs on various aspects of landscape contracting, starting with a unique two-session keynote presentation. Nationally-known Dick Seman will present a three-hour program on "Communicate to Motivate" dealing with personnel management in an in-depth analysis.

The Trade Exhibit will be coupled with a unique new program the following morning — the Equipment Demonstration program. Held in a bare-earth field adjacent to the hotel, the session will feature all of the major equipment manufacturers showing and demonstrating their machines for the industry. As the program will be held in a bare-earth field, the equipment will be fully operational, with back-hoes digging, hydro-mulchers spraying, mowers mowing, and so forth.

Technically-oriented Specialty Workshops will cover Interiorscape Contracting, Maintenance, Revegetation/Erosion Control, Public Relations and Insurance, and Lawn Care Workshop.

Full information and registration materials are available from: Associated Landscape Contractors of America; 1750 Old Meadow Road; McLean, Virginia 22102.

More than 200 companies will exhibit at the Georgia World Congress Center. The first GCSAA show was held at Detroit's Fort Shelby Hotel in 1928 where there were only 27 exhibitors.

PGA Hall of Fame inductee Gene Sarazen will be the keynote speaker. Educational themes will include The Way of Change, The Future of Water, Turf Management, Public Golf Course Management, Executive Appraisal, Conflict Management, and Applying Discoveries.

While superintendents tour Atlanta's finest golf courses, their wives can tour some of Atlanta fine older homes or Stone Mountain Park.

Interest persons should contact GCSAA, 1617 St. Andrews Drive, Lawrence, KS 66044. Registration deadline is Jan. 6.

TURF

Research observed at Virginia field days

Approximately 280 turf professionals from 13 states were able to view the latest turf equipment, products and research at the 1978 Virginia Tech Turfgrass Field Days and Trade Show.

The two days of activity began at Lane Stadium with a tour of exhibits where 35 commercial businesses displayed turf products and equipment.

Participants then moved to Tech's Turfgrass Research Center to see

Richard E. Schmidt, associate professor of agronomy at Tech, demonstrates research on sub-irrigation of putting greens at the Virginia Tech Turfgrass Field Days and Trade Show. This method of irrigation has proven effective in conserving water and appears to have the potential of relieving dry spots on greens.

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GOVERNMENT UPDATE

Second member of cancer group quits

Dr. I. N. Dubin, professor of pathology at The Medical College of Pennsylvania, resigned his position on the Environmental Protection Agency's Carcinogen Assessment Group complaining of CAG's chairman's lack of respect for research findings and interpretations. Dubin was the second member of CAG to resign for this reason.

Cases mentioned by Dubin evidence that Endrin did not cause cancer in an FDA study which CAG Chairman Albert disagreed, and a case with tests for carcinogenicity of Dimilin.

Dubin said Albert's knowledge of pathology, "is so meager that he does not understand the general principles or what goes into making a histopathologic diagnosis."

Lignasan effectiveness questioned

A chemical registered for use against Dutch elm disease was ineffective in reducing disease development when used at recommended rates in tests at the U.S. Department of Agriculture's Nursery Crops Research Laboratory, Delaware, Ohio.

Dr. Lawrence R. Schreiber, plant pathologist and research leader, told the American Phytopathological Society here today that he tested the chemical, Lignasan BLP, on elm trees inoculated with two strains of Dutch elm disease.

One fungus strain had been developed that was tolerant to the chemical, and the other strain was sensitive to it. Neither strain was inhibited when the chemical was injected into diseased trees at the recommended dosage. When the dosage was increased to five times the recommended rate the sensitive gunfus strain was inhibited, but the tolerant strain was not.

"These research results must be given serious consideration when Lignasan BLP treatment is considered," Schreiber said.

Aquatic weed research agreement signed

A new Memorandum of Understanding to strengthen cooperation in conducting research programs for the control of aquatic weeds in reservoirs, irrigation canals, and drains was signed recently by three federal agencies: the Bureau of Reclamation, the Fish and Wildlife Service, and the Science and Education Administration. The first two are part of the Department of the Interior; the latter, the Department of Agriculture.

Agriculture and Interior agencies have had cooperative research agreements on specific weed control studies since 1947, but the new agreement is broader and will enable the three agncies to conduct studies on problems of mutual interest.

Since enactment of the National Environmental Policy Act of 1969, it has been increasingly difficult to develop aquatic weed control technology that meets the safety standards of the three cooperating agencies and the Environmental Protection Agency.

Primary concerns expressed by agency officials were assistance to irrigators and other agricultural interests, protection of the environment, and efficient research to develop improved management systems to accomplish those objectives.

EPA grants expanded carbaryl label

One-gallon jugs of Sevimol 4 carbaryl insecticide, product of Union Carbide's Agricultural Products Division, have been granted an expanded registration by the Environmental Protection Agency. Shade trees and ornamentals have been added to the registration, along with cotton and certain vegetables and forage and field crops. Registration for the gallon size previously was limited to tobacco pest control.

research projects being conducted. Comparisons of herbicides, pesticides, fertilizers, irrigation systems, seed varieties and soil types were made by Tech faculty members.

A major highlight at the research stops was an experimental subirrigation golf putting green. The green is constructed like a conventional U.S. Golf Association green, except for the addition of water emitters installed on top of the gravel layer. Water is fed through the emitters and the moisture is distributed by capillary action.

"This system appears to be a promising method of supplying water uniformly to turf areas without having to saturate the surface soil, and of reducing soil aeration," John F. Shoulders, Virginia Tech Extension specialist in turf, said.

TURF

Florida turf managers explore coming era

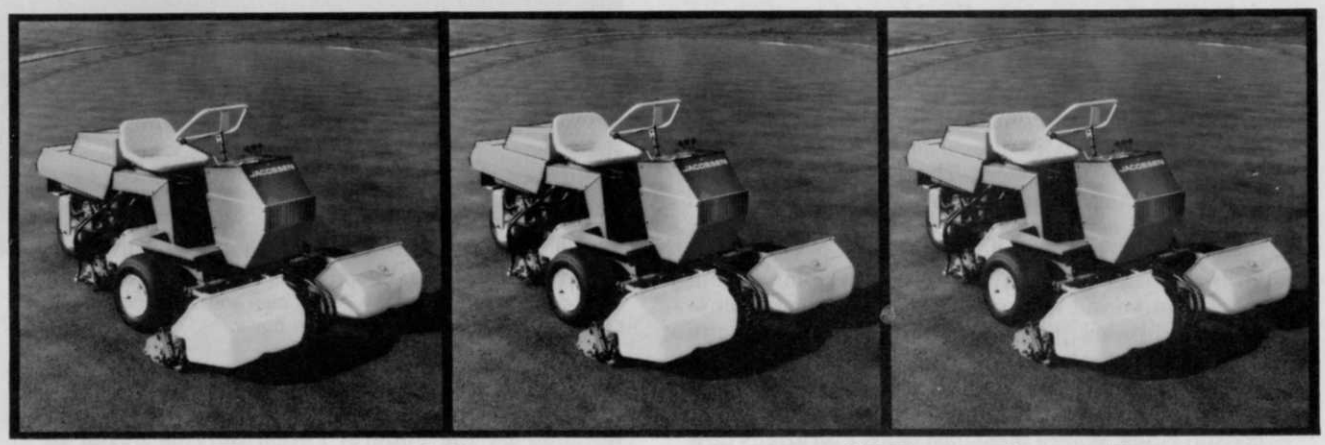
A broad and varied program of educational seminars and an exhibit area filled with 86 suppliers of seed, chemicals, and equipment drew 750 turf managers to the 26th annual conference and show of the Florida Turf-Grass Association in Orlando recently.

Dr. James B. Beard, professor of turfgrass physiology at Texas A&M University, discussed the university's turfgrass current research projects in his keynote address. "We're still a very young science in turfgrass," he noted, "but we're coming."

Research programs such as the one at Texas A&M are producing much valuable information on turfgrass science, but are not cheap. Dr. Beard outlined the costs of his university's 3-year-old program and came up with a total expenditure of $686,000. That figure includes the value of much irrigation and laboratory equipment donated by manufacturers, as well as a building, a greenhouse, test plots, stress physiology laboratory, and other equipment.

"I see a new era on the horizon. EPA has weeded out the retired colonels and liberal arts graduates who were interpreting chemical labels they couldn't even read," said Dr. Richard L. Lipsey, pesticide chemical coordinator at the University of Florida during his talk on turf pesticides.

Win a Greens King!



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FORT LAUDERDALE'S PLAN TO RESTORE TREE CANOPY

By Daniel J. Mackey

The fast developing city of Fort Lauderdale, Florida, has some unique urban tree problems which have evolved as the result of destructive building practices, and the lack of city canopy planning.

It all began a long time ago, when Fort Lauderdale, like the rest of the Florida east coast, was a twenty mile wide pine ridge with the Atlantic Ocean, beach, and marsh on the east, and the massive Everglades on the west. There were bald cypress, red maple, laurel oak, willows, red bay, and Carolina ash in the 37,000 acres of cypress swamp to the northwest. The Everglades were a vast wilderness of trees and native palms amidst clumps of seagrasses. Tropical hammocks, or "islands" of trees were composed of live oaks, strangler figs, and red maple trees. Upland hammocks contained native varieties like mastic, stopper sabal palm, pidgeon plum, poisonwood, satin leaf, gumbo limbo, wild lime, and paradise trees. Behind the beaches there were red, black, and white mangroves, seagrapes, and sea oats. On the coastal ridge, where most east coast Floridians now live, there were two types of pine forests. On upland, well drained, sandy soils stood the scrub pine forest accompanied by sand pine and scrub oak. The second type of forest on the Atlantic Coastal Ridge were pine flatwoods, made up of dense stands of slash pine towering over grasses, saw palmetto and gallberry. Until the turn of the century, Fort Lauderdale was primarily covered with these pine forets.

Coconut palms were confined to the beach and inland waterways. The coconuts were washed in from the Carribean Islands and tropics to the south. The winds and tides brought them here, but the coconuts rarely had a chance to sprout new trees beyond the shore due to competition with native vegetation.

By the early 1900's loggers and pioneers had leveled much of the great forests, and the slow development of Florida continued. But even as early as ten years ago, Fort Lauderdale and other South Florida cities were still beautiful beyond description. Then came the unlimited growth which continues today, and with it came the practice of clearcutting all trees at building sites. Under this money-saving practice, no trees were spared by the bulldozer. The land was drained, the trees dragged away, and sometimes if lucky, a few exotics were plopped around the building or road.

Residents, shopkeepers, and city officials saw the majesty of the leaning coconut palms along the beach and rivers and decided the palms would look good on their property too. The Jamaican tall palm was especially seen as a drawing card for tourists. The cities planted these stately palms everywhere; on street medians, parks, school grounds, around public buildings, and beside roadways. A monoculture of palm trees was encouraged, therefore, and the image of Florida (as palm trees on a beach at sunset) would prove costly to South Florida's canopy cover.

Recent commercial development in Fort Lauderdale shows little concern for tree canopy. A new plan and ordinances have been created to restore native tree cover.

While houses, buildings, and roads were being built without regard to tree cover, a pilot program initiated by the Federal Forest Service began in Fort lauderdale, in 1971. It was only the second of its kind in the United States — the quiet beginning of urban forestry. In 1973, the Florida Department of Agriculture and Consumers Services' Division of Forestry assigned the first of three subsequent foresters to Fort Lauderdale's public works department. The results of a canopy consensus of the entire city by the urban forester that year were shocking. Only 4.9% per cent of the city had canopy cover! The canopy cover still holds at that mark. In that same year, the new urban forester took a street survey and found the great majority of public landscaping was done with palm trees, although live oaks were also used. A more recent 1976 field survey taken in Broward County, (of which Fort Lauderdale is a part) showed that 94 percent of the original 104,000 acres of forest are gone. Therefore, only 2.5 percent of the entire county has tree cover — a meager 6,191 acres.

Coconut palms planted by the city, residents, and businesses, were a saving factor in providing at least minimal tree cover — until lethal yellowing hit. So called because the fronds turn a sickly yellow when infected with the disease, lethal yellowing was first discovered in Jamaica in 1933. It first became evident in the United States in 1955 at Key West. About 75 percent of the coconut palms on Key West island soon died, and the new blight to America quickly spread up the Florida Keys and onto the mainland. In 1974, it was estimated that Dade and Broward counties had 500,000 coconut palms. Today over 95 percent are dead, and the few remainiing survivors are on borrowed time. The coconut palms on Fort Lauderdale's city property are injected with anti-biotics four times yearly to slow down the disease, and marked each time with a different color spray paint. This treatment, however, only postpones the inevitable, and researchers are still unable to find a lasting cure for the disease. But scientists from the University

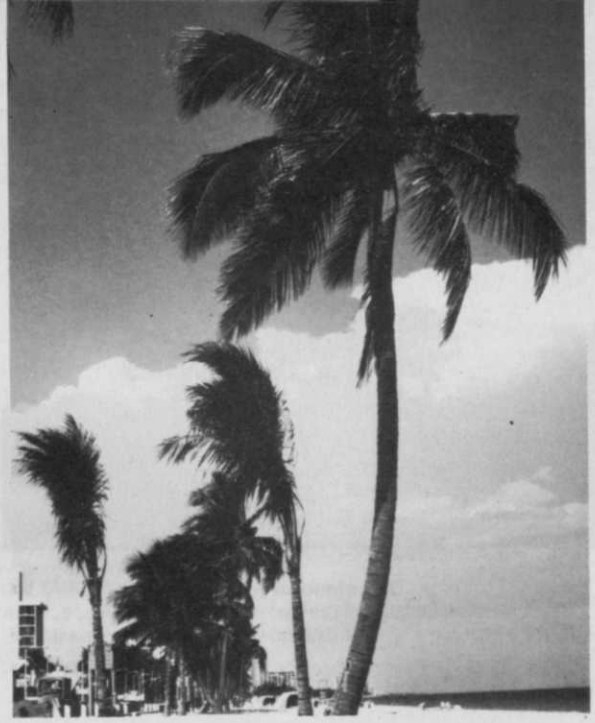
of Florida's Institute of Food and Agricultural Sciences now think a quarter-inch tree insect called *Haplaxius* may be the carrier of the mysterious disease. Lethal yellowing also seems to be infecting other palms and tree species in South Florida in differing degrees. The Malayan Dwarf palm tree is highly resistant to the disease and is easily mistaken for the Jamaican palm, the appearance is so similar. This is why Malayan Dwarf palms are now being promoted as the Jamaican's replacement.

Lethal yellowing may be seen as a blessing in disguise someday, although the blight has further reduced the already inadequate canopy cover in Fort Lauderdale. Residents and city officials now realize the need for diversified planting of a mixture of tree types, so that when natural breaks do occur, there will be plenty of back-up vegetation to replace them. The day of monoculture planting in Fort Lauderdale is over. Now the stress is where it should be — on native varieties which are more suitable to the environment.

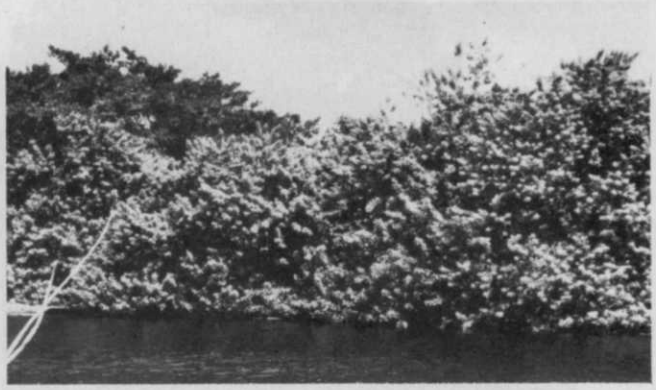
But coconut palms are not the only non-native exotic tree species which has usurped the rightful place of indigenous trees. The worst offenders are three junk trees which are invading at a rapid rate, years after their initial introduction. The Brazillian Pepper tree, locally called "holly tree," has become an urban weed tree in the city of Fort Lauderdale. It grows quickly on land disturbed by development, where its seeds are cultivated by the exposed soil. It is not uncommon to see wooded areas completely overcome by Brazillian Pepper trees, and see them growing out of sidewalks beside city buildings. Some birds, including the native mockingbird, love to feast on the red Brazillian Pepper seeds when ripe. But the seeds are also inadvertently dispersed by such birds throughout the city and countryside. The Pepper tree was introduced to Florida in the early 1900's because it is a fast grower which thrives near water, like all the non-desirable pest trees in South Florida.

The Australian Melaleuca tree was imported for many years as a specimen and lawn plant replacement for clearcut indigenous trees and plants. It was also widely used by the city as a street tree, and until very recently, its snowy blooms were of high ornamental value. The blooms extract a volatile odor which causes allergic reactions and respiratory problems in some people. The Malaleuca is another water glutton with roots which inhibit native vegetation growth. The magnificent Everglades are severely threatened by the Melaleuca's pervading presence. Melaleuca seed pods are large — about the size of an eraser — and contain many seeds. The seeds are dispersed by wind and birds and stay viable for a long time. Georgia Tech's Engineering Experiment Station is doing research on the uses of melaleuca wood by "pyrolyzing" it. Pyrolysis is the decomposition of solid organic waste through the action of heat in the absence of oxygen. Through the process, melaleuca wood is transformed into fuels like wood oil, char, and gas.

The third major pest tree thriving in Fort Lauderdale and other Florida towns, is the infamous Australian pine. These tall, brittle looking pines were initially introduced as windbreaks on



Malayan Dwarf palms planted recently next to an infected Jamaican Tall palm. Brazillian Pepper has taken over river bank below.



farms, cattle ranches, and roads. Some residents are concerned over the small forests of Australian pines quickly growing in the western portion of Fort Lauderdale. Others, who are glad of any tree cover no matter the source, look affectionately at the pines and attempt to save them from the ax, as in a controversial battle between citizens and Department of Transportation officials earlier this year. Florida state parks on the east coast seem to be fond of the soil-holding quality of Australian pines and use them widely, especially on beaches. They certainly give a "forest feeling" when grown together. The problem is, Australian pines are also, as one local editorial put it, "messy, short-lived, grow like weeds, and are not good habitat for native South Florida wildlife." Use of the trees on state roads thirty and forty years ago preceded the discovery that the pines mature at thirty years, and rot within from fungus and insects and topple in light winds. Australian pines require continual maintenance for this reason, and are less dangerous when cut back to hedge size. When the pines are totally cut down, within weeks, dozens of new trees sprout up around the stump.

Brazillian Pepper, Melaleuca, and Australian pine, were all introduced to South Florida because they grow well on sand ridges, are salt tolerant,

One stand of slash pine on Interstate 95. The Australian Melaleuca (below) was imported as a specimen tree but now is considered a pest tree.

and are fast growers. What early Floridians didn't realize, however, was that these same exotics would today threaten the very existence of their native flora.

Two city nurseries are crucial in the battle against exotic tree problems and the much needed reforestation of Fort Lauderdale. One nursery is twelve acres beneath the noisy electric power wires of a local utility company. The expansive nursery is in reality, a growing storage place for trees awaiting planting on public properties. Since the nursery is about fifteen years old, mostly palm trees grow there. Varieties which are resistant to lethal yellowing are also stored there after importation.

The primary city nursery is wedged between a busy Fort Lauderdale street and a corner of the beautifully maintained Lauderdale Memorial Park Cemetery. There are approximately thirty-five varieties of trees jam-packed into the diminutive nursery, although according to manager Val Olszak, they will "cut it down to ten or twelve varieties in the future and emphasize hardwood species." Most of the trees are indigenous to Florida, although exotics are also present. All of them will one-day be planted to form the future urban canopy of Fort Lauderdale. They include European black olive trees, red cedar, mangroves, garcinia, silver buttonwood, oak, lychee, fan palms, cypress, Malayan palms, maple trees, green ash, tree hibiscus, gumbo limbo, tamarind, bottlebrush, oleanders, parkensonia trees, mahogeny, and benjamin trees.

The trees are bought from local nurseries and the Florida Division of Forestry, donated, grown from seed, or from cuttings. City officials would like to see the nurseries become self-sufficient within two years, but space and money are problems. The primary nursery has become so crowded in the past year, over 750 trees must be stored in concrete containers beyond the nursery grounds. The urban forester has been looking at from 100-150 acres of public land which could be used for growing purposes, but money is still an ever-present rebuff. Nearly everyone involved with reforestation, including Mayor E. Clay Shaw, (a former nurseryman) calls funding "a problem of priorities." Nursery manager Val Olszak sums up the frustration when he says, "working for any city, you've got to just keep doing your job as if nothing will change — that way you get the job done and sleep nights." The city's Park's and Recreation Division, which had a 1977-1978 budget of $2.2 million, allocated $45,000 for nursrey operation and expenses, and $60,000 for buying trees, while city crews from the Park's Department did all the planting. Mayor Shaw says the reforestation program, begun with the arrival of the first urban forester in the early 1970's, is beginning to pay off. He says "Fort Lauderdale has been planting 4,000 trees a year through various projects," but admits, "the city should accelerate its tree planting program and double its efforts."

Mike Moore, the present urban forester assigned to Fort Lauderdale by the Florida Division of Forestry, says Florida is one of the leaders in urban reforestation, and that "the urban projects in Jacksonville, then Fort Lauderdale, set the precedent; now other cities are creating their own forestry and landscaping divisions by using the state assigned foresters permanently on city pay — and this is a growing phenomenon." When one thinks of a forester, urban or rural, one imagines a man working outside. But Moore spends more time communicating what is needed to be done. As a state employee, Moore can do no more than explain problems and present viable solutions. It's the city's job to decide the best choices and act. His most important responsibility is to formulate continuing reforestation plans for the city. He explains he's now "working on a written overall program of reforestation with a greater emphasis on the city assisting in residential planting of swales and roads." Up until now, he says, "we've been chipping away at the canopy problem." The job is a big one. Moore estimates that if the city crews were to plant 500 trees on city property only, for the next 30 years, by the year 2028 the trees will have matured enough to give the minimum 35 percent urban

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The city has been working with resident groups like homeowners associations, women's clubs, and civic improvement associations. The city usually gets involved when individuals or groups call the forester. Sometimes residents purchase the trees directly, or use the forester as a personal agent in purchasing the trees at a better price. Tree planting has become a popular project for neighborhoods as a result of this kind of assistance. Last year, for instance, a two-day plant sale in Fort Lauderdale drew 180,000 persons, and sold $25 million worth of plants and trees! Moore believes this appreciation of flora and concern for the urban environment is vital if the reforestation is to succeed. Citizens also get involved by donating trees to the city "tree bank" for eventual transplanting on public property. A tree donation by homeowners is a tax deductible contribution. The city is also considering a program to save doomed trees from demolition sites to supply the nurseries.

Two laws have been instrumental in the evolution of Fort Lauderdale's loosely knit reforestation program. They are the cogs without which the program would fail. The Tree Preservation Ordinance is unique in the United States, and generally says all trees which are cut down must be replaced. The ordinance is aimed at builders, who are required to take out a $5 permit to remove each tree, and then must replace it. When a builder removes a large tree, he must replace it with a number of smaller ones, which is good for the canopy because it generates more trees. When builders find they can't fit all the required number of small trees on their development, they can donate the excess trees to the city and claim it as a tax deduction. This helps the small developers who find it financially difficult to build around large trees. Now they can build without high costs by simply replacing the old trees with new, smaller ones. The big developers, on the other hand, are finding it easier to retain the old, large trees, and this is also great for the urban canopy. Since the emphasis of the ordinance is on trees, not enforcement, violators are given the option of paying a stiff fine, the monetary value of the destroyed trees, or donating a predetermined number of trees to the city.

The second important law is called the New Parking Lot Ordinance. It was passed in response to the canopy problem, and the "concrete jungle" atmosphere created by hot, ugly, expansive parking lots with few, if any trees. Both public and private parking lots have been built this way for years, and this new ordinance is quickly changing that situation. Within five years all parking lot owners must comply with the ordinance by replacing up to 50 per cent of the land's original tree cover. As with the Tree Preservation Ordinance, a drive through the city is all that is needed to realize both laws are working. Fort Lauderdale is getting greener every day.

Meanwhile, reforestation of that part of Fort Lauderdale's beach commonly referred to as "The Strip" has begun in earnest, with mostly Malayan palms and a few Australian pine seedlings. Palms will be stressed only at "key tourist areas," like the beach, to retain the citys' tropical image, according to forester Moore. Residential areas are being

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Royal palms are highly resistant to blight.

planted with a wide variety of native trees (and some exotics), with no plans for planting palm trees.

City planting projects along entrance and exit ramps on Interstate 95 in the past year have given each ramp a character all its own, while continued plantings on the median strips of major roads help absorb the carbon monoxide spewed by Fort Lauderdale's often heavy traffic. Public buildings and surrounding grounds in the city are dotted with young five-foot tall trees which will quickly grow in the year-round sunshine and annual rainfall of 64 inches.

The urban projects initiated by citizen groups are also having a positive effect on the canopy problem, although it is too soon to measure results. The pest exotics are a problem which will continue to get worse, but as Moore says, "periodic monitoring of hammocks and other native flora areas, and the continued planting of native trees will help."

The prognosis for Fort Lauderdale's tree problems is good. The still unusual situation of a city having an urban forester, a reforestation program, and the necessary legislation to back them up, is an optomistic sign of green things to come. But it will take generations before the foolish development practices and lack of planning of the past thirty years will be even partially erased, because, as Kilmer aptly put it, " . . . only God can make a tree." — and even in sunny Florida, that will take a long time. **WTT**

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PROFILE

DEALERS AND DISTRIBUTORS

DISTRIBUTORS RECOGNIZE POTENTIAL OF TURF MARKETS

Turf product distributors and dealers polled by Weeds Trees & Turf Magazine say 1978 sales will average 20 percent higher than 1977 sales, and 1979 sales are expected to increase 15 percent despite awareness of tightening credit.

Furthermore, distributors view turf markets as having greater potential for growth than agriculture.

Nearly 40 percent of 300 turf distributors mailed questionnaires cooperated in the survey. They averaged $1.5 million in sales and service and 30 years in business. The typical mix of markets served by the distributors is 31 percent professional turf, 26 percent consumer, 30 percent agricultural, and 13 percent other markets, such as structural pest control and schools.

The distributors averaged 165 professional turf customers with golf course superintendents, landscape contractors and park superintendents topping the list. Sales to other distributors came next, followed by nurseries, industrial users, and lawn care companies. Arborists, cemetery managers, and contract applicators were mentioned as customers in less than 15 percent of the businesses.

There is no clear distinction between dealer and distributor in most cases. Many businesses (more than 25 percent) can be considered both a dealership and a distributorship. The distributor sells wholesale to retailers. Whereas, the dealer is the agent for a manufacturer and sells retail to his customers. In the chemical and equipment turf markets, there is considerable overlap.

Thirty three percent of the respondents sell to other distributors, although just 11 percent buy from other distributors.

More than a third of the distributors sell private brand chemicals and equipment. Half sell standard brands only, and about ten percent sell only private brands. Ten percent formulate or reformulate chemicals.

When asked to compare various markets, twice as many distributors said the turf market is growing faster than agriculture. The turf market is also less price sensitive than agriculture in their opinion.

Quality of product is the most critical concern of distributors when selecting brands. Profit is second on the concern list, followed by parts and product availability, price and service.

Equipment distributors with service departments strongly favor original equipment replacement parts. Nearly 90 percent use only parts from the manufacturer. Less than ten percent use parts from other sources for repair.

Products viewed as profit centers by distributors are fertilizers and chemicals, mowing equipment and small tractors. Also mentioned frequently were turf vehicles and seed.

Products with disappointing sales in recent years according to distributors are fertilizers, chemicals, and mowers, which are all in the profit center category too.

Other concerns voiced by the distributors are government regulations (especially EPA), tightening credit combined with rising interest rates, inflation, and direct sales by manufacturers. Direct sales by manufacturers is a lingering concern of distributors. Periodic instances where a manufacturer takes over a regional branch for economic reasons or fails to pass on leads to a regional distributor are the main cause of distrust between distributors and manufacturers.

Certain products, such as trim mowers, small chain saws, fertilizer, and flexible line trimmers are being sold at lower prices by mass merchandizers. Threat of great business loss to mass merchandizers appears to have faded somewhat in the past few years. Distributors are willing to give up business on these items to an extent and manage to salvage part of it because they are full service to the customer. Convenience and service by the distributor still play influential roles in buying decisions.

When asked about recommendations for customers on how to aid in purchasing, the distributors suggested volume buying, ordering in advance of need, paying cash, leasing, and paying bills on time.

The distributors were asked what quantity earns a price break. Ansers varied tremendously. However, reductions of two to 20 percent are available for large quantity buyers. **WTT**

What minimum orders qualify customers for price breaks?

PRODUCT	QUANTITY	REDUCTION
Fertilizer	1 ton	from 5% to 25% 5% is common
	Truckload	8%
	Car Load	10%
	5 Tons	8%
	100 bags	2¢ a pound
	200 bags	39%
	½ ton load	5%
	14 tons	5%
4¢/lb.		
	500 lbs.	?
	½ Ton	?
Seed	5,000 lbs.	10%
	50 lbs.	2% to 20%
	10 Bags	2%
	1 ton	2% to 10%

PRODUCT	QUANTITY	REDUCTION
Chemicals 8 responses	100 cases	5%
	Case lots	5% is common
	100 lbs.	10%
	$3,000	10%
Small Package Insecticides	100 gallons	15%
Granular Herbicides	1 ton	10%
Elanco	Pallet	15%
Dow	Pallet	15%
Lawn Mowers	3 or more	1%
	$3,000	3-4%
	8	2%

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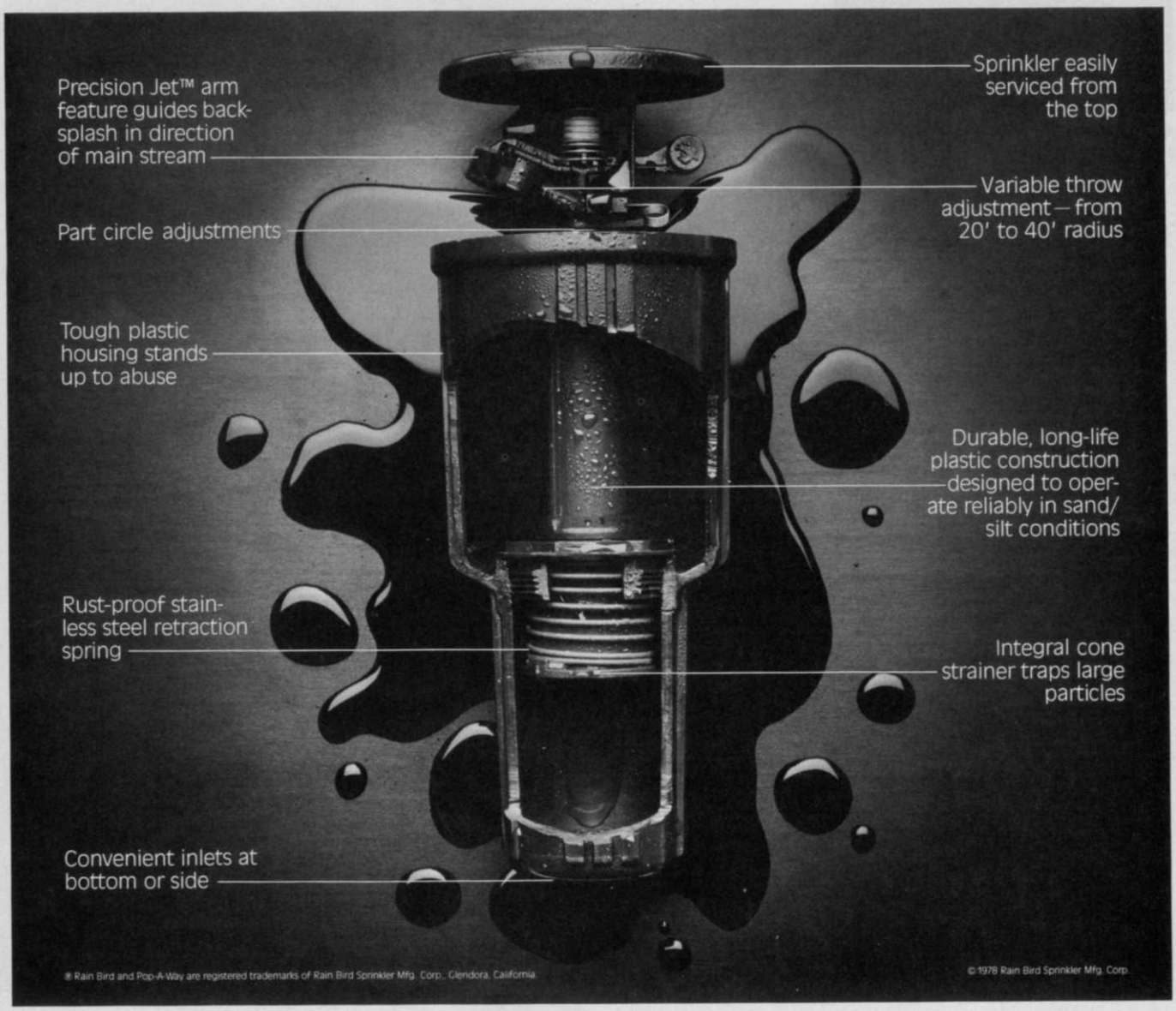

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Grady Hassell, president of Lawn and Turf, Inc.

Lawn and Turf, Inc., is a full service distributor in Conyers, Georgia, 30 miles east of Atlanta. Equipment repair, leasing, educational seminars, irrigation component sales, and a small chemical business make up Lawn and Turf and keep its customers from looking elsewhere for supplies.

Each year, 1,000 companies spend more than $3 million at Grady Hassell's 15-year-old distributorship. Customers include the city of Atlanta, 260 golf courses, 50 parks and municipalities, 35 lawn care companies, and 15 landscape contractors.

Grady has been in the turf equipment business for 21 years and says he enjoys every day. Established with the help of Jacobsen in 1964, Hassell now employs 28 persons and the walls of his 24,000 sq. ft. building are starting to bulge.

Lawn and Turf now carries Cushman, RainBird, Gravely, Excel, Heckendorn, Broyhill, Royer, Olathe, Par Aide, and Standard equipment.

The chemical business, maintained mainly as a service to equipment customers, grosses $50,000 each year. Lines carried are Elanco, Du Pont, PBI-Gordon, Mallinckrodt and Tuco.

"We don't really put much effort into chemicals and fertilizer because we do it as a service. However, for the effort put in the profit is good," says Hassell. "Equipment and service are the backbone of our business.

"We also carry the Jacobsen homeowner line as a retailer, not distributor. The $25,000 brought in from this line still comes mainly from our commercial customers."

Lawn and Turf maintains an

inventory valued at $650,000 at all times. Half is equipment for display and stock, and the other is chemicals and repair parts. Each year Lawn and Turf does about $200,000 business in service and parts to equipment customers.

"Half our customers are equipped to do their own repair work," Hassell states. "The remainder depend upon us. Our biggest suggestion for equipment customers is that they bring their equipment in for winter repair and not wait until spring. In the winter, repairs can be made more carefully and getting parts from the manufacturer is less of a problem."

Other suggestions from Hassell are to maintain a stock of commonly replaced parts such as rotary blades, points and condensers, etc. "This year we've had more difficulty getting parts from manufacturers fast," Hassell says. "Manufacturers could not keep pace with the demand."

Lawn and Turf has a full-time staff of six in service. Usual turnaround is a week. Some items such as greensmowers receive priority.

"We like to think that all equipment is good and it's the local distributor or dealer that makes the difference," Hassell remarks. It depends upon the people and the service they provide whether a particular brand is strong in one area and weak in another."

Another service extra provided by Lawn and Turf is leasing. "We do ten to 15 percent of our equipment business this way through a company called Equico. The customer puts down about ten percent and then makes monthly payments. At the end of the lease he can buy the equipment if desired."

More than 600 people a year attend educational and product seminars at Lawn and Turf. Budget counseling is also offered to help supervisors justify equipment expenses to superiors. "The good supervisor knows how to do his job well, but often needs help in projecting his budget to present to his superiors. We help them justify purchases by showing efficiency improvements and helping them prepare necessary documents," says Grady.

"We have noticed in the past couple of years that budgets aren't getting completed and approved until July and August. Whereas budgets and purchases used to be approved early in the year, now it seems many more are buying after July. We now do probably half our volume in the second half of the year. Another factor is that companies try to get along without a piece of equipment first. Then, they place an order the day after they need it."

"Our major suppliers require stocking orders in September for about 60 percent of our annual purchase. We receive that stock usually by December. Beyond that, we have sales meetings to project customer needs on a weekly basis and make appropriate orders."

Hassell believes the greatest potential in the turf equipment business today is rotary mowers in the 25 to 72 in. range. These mowers range in price from $3,000 to $5,000 and were designed for use other than golf courses.

"The golf course market is tremendous, but since 1974 the golf market has not shown growth. It is mainly a replacement market," Grady states.

Most of Lawn and Turf's promotion is through direct mail and regional trade shows. "We send an attractive piece with a cover letter that hopefully doesn't end up in the trash like many direct mail promotions," Hassell says.

Lawn and Turf's formula of full service and a complete product line is working. In 1978 its sales increased 12 percent. Another reason is Hassell's attention to detail. He knows every percentage of productivity and sales without checking. Together, they make up a strong force in Georgia turf equipment sales and service. **WTT**

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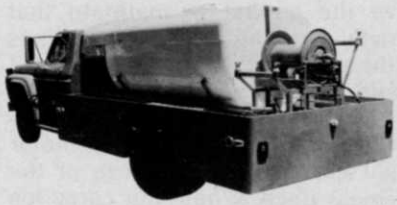
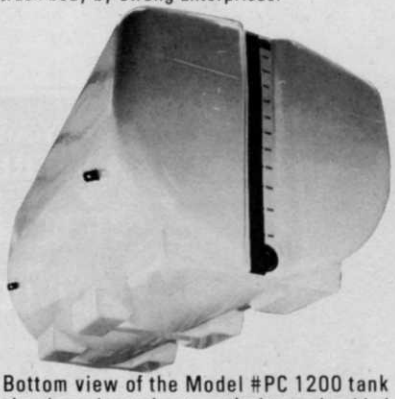


Model #PC 1200 fiberglass tank equipped with fiberglass pump cover, Model #D 200 gallon mixing tank shown mounted on a custom truck body by Strong Enterprises.



Bottom view of the Model #PC 1200 tank showing to best advantage the integral molded mounting base and steel hold-down lugs designed for ease in mounting on your truck and eliminating costly installation.

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OLSEN DISTRIBUTING CO. CAREFUL, STEADY GROWTH

Olsen Distributing Company in Barrington, Illinois, is an equipment distributor and a chemical dealer. More than half of Bob Olsen's business is to retail turf supply outlets. Forty percent is direct to turf users in the landscape, nursery and golf course business.

"We've grown carefully but still quickly in our seven years of operation," Olsen says. "I think a problem with a lot of companies is that they grow too fast and then don't have the capital to maintain that growth. I've had to turn down lines in the past year that two years ago I would have given anything to get."

"Manufacturers don't put restrictions on what lines a distributor might carry, but the nature of the business does. When you carry too many lines, or competitive lines, you don't do justice to any of them," Olsen says. "I think when you go out to sell and only have one line on your mind, you're going to zero in and do a better job selling that concept."

Olsen's theory of business is maintaining a variety of lines to fit the needs of individual customers. "You can put a higher priced item into an area where people are not really price conscious, but you have to put economical products into areas where they are demanded."

Olsen has his own private label on fertilizer formulated by Knox Fertilizer Company in Indiana. He also carries Swift's Par-Ex fertilizer's, Lebanon Country Club, USS Steel, and W.R. Grace.

Equipment lines are normally determined at the National Hardware Show. "You can get a good idea of what is on the market in one or two days," Olsen says. "Plus you can see and handle the actual product."

Olsen Distributing Company is represented at shows all over the country, such as The Garden Industry of America show in Kansas City last year and in Cincinnati this year. Olsen has been involved with the Mid-America Trade show for twenty years. He is a member of the Golf Course Superintendents Association of America and will be in the Bobcat booth at their show in Atlanta this year.

Olsen discovered Bobcat from a quarter page ad in a trade journal. He picked up the phone, dialed the factory, and "its been a mutually tremendous relationship", he says.

He also distributes Power Trim, Hoffco, F.D. Kees, Columbia Products, and Hudson. Olsen does not feel that there is a financial advantage in handling his own private brands. "Today, with the major manufacturers and the dollars they have to put into advertising, one is not really more profitable than the other. However, maybe we have a town where there are two different retailers. We can put, say, W.R. Grace's Wonder-Grow line into one and then we can put our private label into the other. It gives you selectivity and flexibility."

All of the equipment handled through Olsen Distributing is sold through servicing dealers. Olsen feels the equipment he handles can only be as good as the dealer backing it up. "In finding new dealers, we normally go by recommendation. I had a recommendation and made a contact at the Regional Lawn Mower Association show and it resulted in a new dealer.

"I personally go and visit a potential dealer, and look at the man's service shop to see if he is adequately set up to service the type of equipment we have. I want all our equipment backed up."

To that end, Olsen Distributing Company also backs up its products. Olsen maintains a large inventory, stocking everything that they sell. Olsen feels that his customers have a definite service advantage. He also stocks parts for his dealers.

Prices are established according to the product and the policies of the manufacturers. Many items have suggested retail prices. Others, such as grass seed, are priced FOB from the factory. "In that case, we have to

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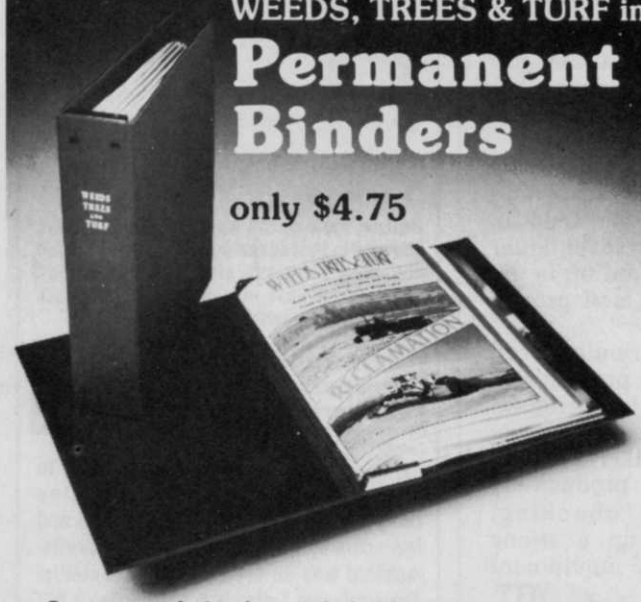

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1978 Bob-Cat Distributor of the Year award is presented to Bob Olsen and his wife Betty (right) by Wisconsin Marine's Dick Lehman.

establish a retail and wholesale price," says Olsen.

Olsen holds equipment demonstrations for his dealers. As soon as a new building is completed, Olsen plans to arrange seminars for customers with university turf experts.

Olsen orders most of its stock in October. It arrives in November and December.

"Right now is the best time to order equipment," says Olsen. "We have an early order program which delays billing until June when customers are beginning to receive revenue from their customers. We start delivering in January. Early orders are up 20 percent over last winter," Olsen boasts.

Olsen says the distributor reduces debt problems for manufacturers. "At our end we investigate customers if we need to. I knew many of my customers before starting the company and I depended upon them when I first got started."

For the future, Olsen is excited about distributing for LR Nelson, an irrigation supply manufacturer in Peoria. He has also added Disston rakes and tools. He fully expects 1979 to be another good year. **WTT**

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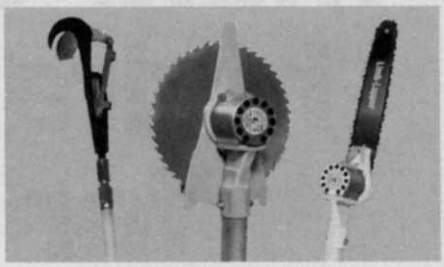
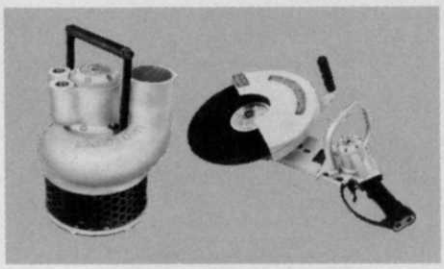


CUT AND PRUNE



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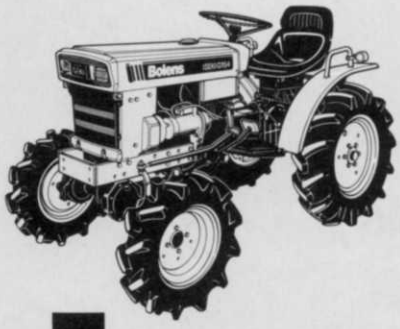

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For more information, contact your Bolens diesel tractor dealer, or write Bill Soellner, FMC Corporation, 215 S. Park St., Port Washington, WI 53074.

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ROAD SALT DAMAGE AND TOLERANT GRASSES

By William R. Kennedy
Research Editor
University of Wisconsin-Madison

Landscape plants do well preparing themselves for winter. They develop a reduced metabolism and begin living off of stored reserves. Most of the competitors of plants lie dormant also during the winter months, assuring that both will start on an even keel at spring's outset.

There is one enemy of plants though that works exclusively in winter, the street and highway snow removal crews. Their use of salt in deicing roads leads to serious alteration of a plant's biota. And, if the landscape industry doesn't solve this salinity problem, there'll be fewer landscaped medians, fewer contracts and more medians and roadside areas covered with blacktop and concrete.

Paul Drolsom and Lou Grueb of the University of Wisconsin have been conducting a study to examine the effects of salinity on plants and soils. They've hit upon some interesting reasons for the adverse effects and are working at identifying and developing varieties that resist high salt levels.

Road salt, principally sodium chloride, can move to the surrounding roadside in a number of ways. It can fall on neighboring soil directly from the salt truck, through brine splash or runoff. Salt can also be kicked off the road by passing vehicles or recrystallize and form a fine white powder that is easily scattered by the wind. A highway industry study showed that half of the salt applied to pavement is carried away only hours after application either on the vehicles themselves or through brine splash and crystal movement.

All this salt laying on the soil and plants neighboring roadways affects the plant biota in many ways.

The soil structure, a basis for fertility, drainage and ultimately plant survival, is drastically altered by salt. Excessive sodium (Na) levels in the soil reduce the cation exchange capacity. Simply, reduced cation exchange sites create a tighter soil that results in poor drainage. Also fewer exchange sites prevent other nutrients from bonding in the soil and making it more difficult for the plant to get the nutrients it needs.

"The high salt levels also create drought conditions for the plant by increasing the osmotic potential of the soil solution according to Grueb. This means simply that more water is tightly retained in the soil structure rather than being made available to plants. This drought stress is especially a problem in dry years.

High sodium levels cause havoc in a number of ways, but the chloride irons "cause greater direct damage to more species of plants adds Drolsom. "We're not sure in what ways the chloride is toxic, but we do know later stages of chloride toxicity are manifested in burning and firing of leaf tips and margins, bronzing, yellowing, premature leaf abscission and sometimes chlorosis" according to a Pennsylvania study.

Grasses With High Road Salt Tolerance

Alkali Socaton	Rescuegrass
Inland Saltgrass	Canada Wildrye
Nuttall Alkaligrass	Western Wheatgrass
Bermudagrass	Tall Fescue
Tall Wheatgrass	Barley
Rhodesgrass	*Puccinellia distans*

Landscapers can protect themselves from excessive salt problems by planting salt tolerant grass species. Most salt tolerant species are native to the western U.S. alkaline soils. Some of these grasses do not persevere in the harsh winter cold of the areas that demand the salt applications for road safety.

One grass that appears to overcome this problem is *Puccinellia distans* or alkalai grass. This grass which is native to western Nebraska and Alaska may have the best potential for use in the upper midwest. The grass was observed growing naturally in the salt contaminated soils along the interstate highways surrounding Chicago according to University of Wisconsin researcher Robert Newman.

The old standby in cool climates, Kentucky blue, has low tolerance to salt even though Fylking, a cultivar of Danish origin was slightly more tolerant than common, Merion or Windsor Kentucky blue.

The following list of grasses shows grasses with good tolerance of high salt levels. The list will be helpful if you land a job landscaping a road right of way or homes along busy thoroughfares.

Alkali socaton; Inland saltgrass; Nuttall alkaligrass; Bermudagrass; Tall wheatgrass; Rhodesgrass; Rescuegrass; Canada Wildrye; Western wheatgrass; Tall fescue; Barley; plus *P. distans* which is sometimes improperly identified as Nuttall alkaligrass. **WTT**

FOLIAR ADSORPTION FACTORS OF PHOSPHOROUS AND RUBIDIUM

By David W. Reed and Harold B. Tukey, Jr., Department of Floriculture and Ornamental Horticulture, Cornell University, Ithaca, New York.

Foliar nutrition can offer a more efficient, economical and rapid method of supplying nutrient material to plants than conventional soil application. There is renewed interest in foliar nutrition due to the current high cost of fertilizer and concerns about environmental pollution by leaching and run-off from ground application. As a result, the Horticultural Research Institute (HRI) is helping to support this valuable research.

Foliar absorption of phosphorous (P) compounds has been studied extensively because smaller quantities of P are easily fixed and thus not available for plant use. Results of experiments studying various P compounds and factors affecting their foliar absorption have been highly variable, however. Despite the potential benefits, supplying P in foliar sprays is not practiced widely. pH of the treating solution, which determines the chemical form of P present in it, is one of the principal factors affecting foliar absorption of P. In addition, pH may alter the permeability of the cuticle, generally considered the foliar absorption rate-limiting barrier.

Work was initiated to better define the effect of pH of the treating solution on foliar absorption of phosphorous and rubidium compounds and to determine the factors affecting foliar absorption with possible adaptation to commercial applications. Absorption was assayed by measuring the amount of radioactive phosphorous or rubidium compounds recovered in the plant after application of a known amount, such as a drop to a leaf.

Results: Research results indicated that absorption of phosphate compounds was greatly affected by pH. Absorption was least at those pH values when salt deposits were formed on the leaf surface, and greatest when salt deposits were not evident. The formation or lack of formation of salt deposits was correlated with the solubility and moisture retention of the predominant phosphate form present in solution. Hence, pH did not directly affect the plant's ability for phosphate absorption, but affected absorption by dictating the phosphate form present in solution and the degree of absorption was determined by properties of the predominant phosphate form present. Maximum phosphate absorption occurred with sodium phosphate at pH 3-6, with potassium and rubidium phosphate at pH 7-10, and with ammonium phosphate at all pH values. Calcium phosphate was not readily absorbed.

Absorption of rubidium (Rb) as Rb phosphate also was greatly affected by pH. It was minimal at pH 3-6, but was greatly increased at pH 7-10. This was due to the same factors that were shown to affect phosphate absorption (e.g. the degree of drying and formation of salt deposits on the leaf). Rubidium was used since it behaves similarly to potassium and serves as a radioactive tracer in the study of the uptake of potassium. Rubidium chloride (at pH 3-10) was absorbed to a greater degree than Rb sulfate or nitrate.

Urea, one of the most rapidly absorbed and effective compounds used in foliar nutrition, and several similar, chemically related compounds were assayed as to their effect on foliar absorption of Rb and phosphate. All of these substances decreased absorption of both Rb and phosphate, which was attributed to the formation of salt deposits.

These results indicate that dibasic phosphate (K_2HPO_4), monobasic sodium phosphate (NaH_2PO_4) and monobasic or dibasic ammonium phosphate — ($NH_4H_2PO_4$) and [$(NH_4)_2HPO_4$] respectively — are the most useful phosphate forms. Dibasic potassium phosphate and potassium chloride (KCl) are the most useful potassium forms for foliar application to commercial crop plants.

Several additional experiments were conducted in order to determine the effect of 18 commercially available surfactants (wetting agents) on foliar absorption. Only three (AL 825, Ethomid 0/15 and Tween 85) increased phosphate absorption, but all decreased Rb absorption. Of the three surfactants that increased phosphate absorption, only one (AL 825) was not toxic to the foliage, and therefore practically applicable. However, the advantage of increased phosphate absorption must be weighed against the decreased Rb absorption.

Time course studies demonstrated that both Rb and phosphate were rapidly absorbed and translocated throughout the plant, and hence, readily available for use by the plant. Absorption of both Rb and phosphate was not greatly affected by leaft age. This indicates that the data from all previous experiments, using only one leaf at a particular stage of development, are probably indicative of the response of the entire plant.

Absorption of phosphate by a variety of horticultural species varied greatly, ranging from less than 1% to approximately 15%, whereas Rb absorption ranged from less than 1% to approximately 40%. In addition, plants treated with foliar nutrients produced good growth following treatment and tolerated surprisingly high concentrations of nutrients to the foliage.

Summary: In summary, solution pH affected uptake of P and Rb compounds by dictating the chemical form of the compound present in solution. Solubility, moisture retention, and crystallization on the leaf surface were factors determining absorption. Partially as a result of this research, it can be seen that foliar nutrition offers advantages in production of commercial horticultural crops; in landscape maintenance; in more efficient use of fertilizer to reduce pollution of lakes, streams, and ground water supplies; to conserve energy and reduce costs; and is a very rapid means of correcting possible nutrient deficiencies. **WTT**

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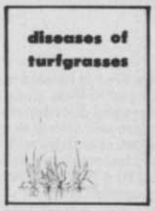

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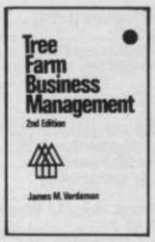

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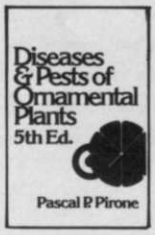

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WTT Index 1978

KEY: Feature article (FA): news story (NS): conference report (CR): editorial (ED): government news (GN): news feature (NF): landscape contractor news (LCN).

Articles

A

	Issue	Page
AAN form council for national promotion (NS)	Jan.	12
(AAN) Nurserymen publish advertising guide (NS)	Feb.	72
AAN offers advice on loss deductions (NS)	May	13
AAN holds one of largest meetings yet (NF)	Aug.	9
ACSH forms to counter "cancerphobia" (GN)	Aug.	10
(ALCA) Contractors gather for Orlando meetings (LCN)	Mar.	10
ALCA to establish student chapters (LCN)	Sep.	10
ALCA eyes prospects (NS)	Sep.	8
ALCA network to provde wage input (LCN)	Oct.	10
(ALCA) Landscape contractors top billion dollar mark (LCN)	Oct.	10
Texas A & M University, Toro to study water uses (NS)	Sep.	13
APMS fights weeds on international level (NS)	Aug.	10
ASPA meeting keys on seed production (NS)	Aug.	9
Watson is presented agronomic award (NS)	Jan.	11
Managing Aquatic plants in small lakes and ponds (FA)	Jun.	16
Florida Aquatic Weed Control Aquatic Weed Contract Management (FA)	Mar.	51
(Aquatic Weeds) "Natural" Herbicide may be possible (NS)	Sep.	10
(Architect) How to improve the landscape contractor/architect relationship (ED)	Jul	20
Athletic field managers say budgets are too low (NF)	Jul.	27

B

(Bentgrass) New creeping bent released by Penn State (NS)	Oct.	9
Board views business skills, communication as keys to Growth (FA)	May	60
(Board) Ability to change research are vital according to board (FA)	Jun.	50
(Budgets) Athletic field managers say budgets are too low (NF)	Jul.	27

C

(Cancerphobia) EPA forms to counter "Cancerphobia" (GN)	Aug.	10
CAST says EPA is unrealistic (GN)	Feb.	14
Cemetery and memorial park management	Nov.	25
Cemeteries strive harder to control maintenance costs	Nov.	26
(Cemetery) Jefferson Memorial Park: Example of cemetery changes	Nov.	30
Chemical Renovation on large college campus (FA)	Mar.	34
(Chemicals) DuPont will rebut EPA PRAR on Benomyl (GN)	Jan.	12
(Chemicals) Cadmium extended, Benomyl RPAR issued (GN)	Jan.	12
(Chemicals) Heptachlor/Chlordane hearing to close (GN)	Jan.	12
(Chemicals) Insecticides may have tree uses (NS)	Jan.	44
(Chemicals) Mirex OK'd for fire ants in S.C. (NS)	Jan.	11
(Chemicals) Scientists identify 5,000 needed uses (NS)	Feb.	12
(Chemicals) Trichem applies for fire ant products (NS)	Jan.	11
(Chemicals) Velsicol indictment comes as shock (NS)	Jan.	10
Chestnut blight, funds appropriated for (NS)	Sep.	13
(Clarke) Gravely acquires Hahn assets (NS)	Oct.	9
(Company notes) Branches added moves announced (NS)	Jul.	14
A Consultant can provide technology by Arnold H. Webster (FA)	Mar.	70
(Contract Appl. Mkt.) Florida Aquatic Weed Control Aquatic Weed Contract Management (FA)	Mar.	51
(Contract Appl. Mkt.) Forest City Tree: Tree Protection Contract Application (FA)	Mar.	59
(Contract Appl. Mkt.) Railroad Weed Control Rights-of-way Contract application (FA)	Mar.	67
(Contract Appl. Mkt.) Smith's Lawn & Tree Inc. Residential, Commercial Contract Application (FA)	Mar.	45
(Contract Appl. Mkt.) Weeds Trees & Turf surveys the Contract Application Market (FA)	Mar.	43
Contractors, architects, nurserymen discuss job estimating	Nov.	33
(Contractors) How to improve the landscape contractors/architect relationship (ED)	Jul.	20
Conwed opens new fiber mulch plant (LCN)	Sep.	10
Crab Apples can be both beautiful and tough by Douglas J. Champman (FA)	Mar.	27
(Crabgrass) Adjuvants may reduct crabgrass germination (NS)	May	14

D

Davey Tree to be sold to employe group (NS)	Oct.	9
DBCP restrictions made permanent (GN)	Oct.	12
Dealers and distributors	Dec.	23
(Dealers and distributors) Lawn and Turf Inc.	Dec.	26
(Dealers and distributors) Olsen Dist.	Dec.	28
Decay factors in our urban forests (FA)	Nov.	14
(Diesels) Make way for diesels in turf care equipment (FA)	Jul.	42
Direct mail advertising boost to spring business (FA)	Feb.	42
Disanto Companies: Design, Build and Maintain (LCN)	Apr.	50
(Disease) Extension loss figures top $90 million (NS)	Mar.	11
Distributors, Viewpoint (ED)	Sep.	5
DuPont will rebut EPA RPAR on Benomyl (GN)	Jan.	12
DuPont will fight for EBDC fungicides (GN)	Feb.	14
DuPont rebuts RPAR on fungicides (GN)	Apr.	15

E

Echo expands distribution facility (NS)	Jan.	44
Environmentalists focus on cities (GN)	Jun.	12
(EPA) Mirex OK'd for fire ants in S.C. (NS)	Jan.	11
EPA announces restricted list (NS)	Mar.	12
(EPA) DBCP restrictions made permanent (GN)	Oct.	12
EPA officials to see arborists work (GN)	Jun.	12
EPA officials observe tree spraying by NAA (NS)	Jul.	12
(EPA) Options sought for disposal regulations (GN)	Sep.	13
(EPA) President wants EPA's budget increased (GN)	Mar.	12
(EPA) 2,4,5-T RPAR involves 424 different products (GN)	May	14
(EPA) Reregistration costs may soar 50 percent (GN)	May	14
EPA returns generic name proposals (GN)	Aug.	10
(EPA) two maybe's, one yes against 2,4-D (GN)	Jun.	12
(Equipment) Conwed opens new fiber mulch plant (LCN)	Sep.	10
(Equipment) FMC will makret Japanese tractor line (NS)	Feb.	12
(Equipment) Jacobsen and Textron ink sale agreement (NS)	Jun.	10
(Equipment) Ransomes, Wisconsin in new venture (NS)	Oct.	10
(Equipment) Tower simulates rainfall provides facts about mulches (FA)	Oct.	22
(Erosion) Denver erosion meeting planned (LCN)	Jun.	10
(Erosion Control) ALCA eyes prospects (NS)	Sep.	8
(Erosion Control) Mulches and binding agents to achieve (FA)	Jun.	22
Erosion Problems, Superintendent uses steel piling to solve muskrat (FA)	Jan.	36

F

(Fertilizers) Soil Test is key to proper fertilization (NF)	Feb.	27
Fertilizers, Turf: The Trends & Basics (FA)	Feb.	24
(FIFRA) Conference committee agrees on state primacy (GN)	Sep.	13
(FIFRA) Inconsistent use exceptions settled (GN)	Sep.	13
FIFRA approved by congress (GN)	Oct.	12
(Finance) Keys to finance a business expansion (FA)	Jul.	41
FMC will market Japanese tractor line (NS)	Feb.	12

G

GAO to review EPA (GN)	Feb.	14
GAO, State registration questioned by (GN)	Mar.	12
GCSSA Takes Over San Antonio (NS)	Apr.	12
(Georgia Tech) Universities use shredders for renovation and composting (NF)	Sep.	16
Gold Metal Winner, Brooklyn Park: (NF)	Oct.	35
(Golf) Use of wastewater subject of survey (NS)	Jul.	12
Grasses, Manager Guide to Warm Season (FA)	Mar.	80
Grasses with high tolerance to road salt	Dec.	31
(Grass Seed), Viewpoint (ED)	Aug.	6

H

(Hahn Inc.) Gravely acquires Hahn assets (NS) ... Oct. 9
Helicopter Spraying by Charles H. Tadge (FA) ... Jan. 22
(Herbicides) Comparison of Preemergent Herbicides for Crabgrass by Ralph E. Engel & C. W. Bussey (FA) ... Feb. 34
(Herbicides) "Natural" herbicide may be possible (NS) ... Sep. 10
(Horticulture) Fourteen $500 grants available for research (NS) ... Feb. 14
(Horticulture) Penn plant variety becomes cover crop (NS) ... Mar. 104
(Horticulture) Solar energy, rocks to heat greenhouses (NS) ... Sep. 10

I

ICI is studying cause of clabber (NS) ... Mar. 103
Idaho foresters get revegetation results (NS) ... Jul. 16
(Industry Advisory Board) Twelve Experts to Advice Magazine for Green Industry (FA) ... Apr. 70
(Irrigation) Andrus agrees with irrigation rules (NS) ... Jan. 11
(Irrigation) Partially Treated Wastewater Solves Florida Irrigation problem (FA) ... Mar. 73
(Irrigation) Sprinkler Equipment From Irrigation Manual by James A. Watkins (FA) ... Apr. 24
(Irrigation) Symposium is set on wastewater irrigation (NS) ... Oct. 10
(Irrigation) Texas A & M, Toro to study water use (NS) ... Sep. 13
(Irrigation) Toro announces low-cost system (NS) ... Mar. 11
IRS offers chance to switch accounting (NS) ... Sep. 8

K

Kentucky clinic to feature experts (NS) ... Jan. 11
Kentucky Bluegrass, Greenbug Damage found on (FA) ... Oct. 26

L

Labor act now up to Senate (GN) ... Jun. 12
Labor reform act has pro-union effect (GN) ... May 14
(Labor Reform Bill) Cloture fails again, labor bill delayed (GN) ... Sep. 13
(Labor) Viewpoint by Bruce F. Shank (ED) ... Jun. 6
(Land Reclamation) Growth in Land Reclamation to Take Significant Jump (FA) ... Jun. 27
(Land Reclamation) Peabody Coal Co.: Abiding By Changing Laws (FA) ... Jun. 30
(Land Reclamation) Southern Seeding Service: 35 Years in Erosion Control (FA) ... Jun. 36
Landscape Award Program, NLA announces landscape award winners (LCN) ... Aug. 10
(Landscape) Contractors gather for Orlando meeting (LCN) ... Mar. 10
(Landscape) Firms predict jump in business (NS) ... Mar. 11
(Landscape) Kentucky clinic to feature experts (NS) ... Jan. 11
(Landscape) Most landscape firms charge for plans (NS) ... Feb. 13
Landscape Contractors Market Statistics (LCN) ... Apr. 39
(Landscape Contractor) California tax cut may help landscapers (LCN) ... Jun. 10
(Landscape Contractor) Construction & Design by Naud Burnett (LCN) ... Apr. 63
(Landscape Contractor) Contra Costa: General Landscaping & Hydroseeding (LCN) ... Apr. 42
(Landscape Contractor) Disanto Companies: Design, Build and Maintain (LCN) ... Apr. 50
(Landscape Contractor) Ladybug Industries: Maintenance Specialists (LCN) ... Apr. 56
Landscape Contractors top billion dollar mark (LCN) ... Oct. 10
(Lawn Care) Manufacturers form lawn & garden group (NS) ... May 14
(Lawn Care) Manufacturers invited to Chicago by group (NS) ... Jun. 12
Lofts establishes new sod division (NS) ... Oct. 12

M

Memorial Park: Farmland to Funland (NF) ... Oct. 42
Mine Sites to receive funds chosen (LCN) ... Jun. 10
Mississippi degree attracts out-of-staters (LCN) ... Sep. 10
Mistblowers by William Burdick (FA) ... Jan. 19
Mower Engine Trouble Shooting (FA) ... Apr. 18

N

National Federation is born in Texas (NS) ... Mar. 10
NLA announces Landscape Award winners (LCN) ... Aug. 10
NLA survey finds guarantee confusion (LCN) ... Oct. 10
(National Turfgrass Federation) Viewpoint by Bruce Shank (ED) ... Mar. 6

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Total Ex. Cap.												
pH of Soil												
Organic Matter %												
Nitrogen No./Acre												
Sulfates No./Acre												
Phosphates No./Acre (P_2O_5)												
Calcium No./Acre												
Magnesium No./Acre												
Potassium No./Acre												
Sodium No./Acre												
Base Saturation % Calcium (60-70%) Magnesium (10-20%) Potassium (2-5%) Sodium (.5-3%) Other Bases (Variable) Exc. Hydr. (10-15%)												
Salt Conc.												
Chlorides												
Boron												
Iron												
Manganese												
Copper												
Zinc												
TOTAL COST FOR MATERIAL PER ACRE												

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(Nursery) AAN forms council for national promotion (NS) ... Jan. 12
(Nursery) AAN offers advice on loss deductions (NS) ... May 13
(Nursery) Biological waste process developed (NS) ... Mar. 11
(Nursery) Cal Poly alumni to create curriculum (NS) ... Jan. 11
(Nursery) Credit Card risky as payment in advance (NS) ... FEb. 14
(Nursery) Florida nurserymen offer cold pointers (NS) ... Jan. 44
(Nursery) IRS offers chance to switch accounting (NS) ... Sep. 8
Nurserymen publish advertising guide (NS) ... Feb. 72

O

(Ohio Turf Conference) Snow didn't scare Ohio turf show goers (NS) ... Jan. 10
(OHPA) Cal Poly alumni to create curriculum (NS) ... Jan. 11
OSHA permits access to safety records (GN) ... Sep. 13
(OSHA) Subcontractor is liable for site safety (LCN) ... Sep. 10
(OSHA) Small businesses exempted from OSHA logs (GN) ... Oct. 12

P

(Penn State University) Universities use shredders for renovation and composting (NF) ... Sept. 16
(Penn State University) New creeping bent released by Penn State (NS) ... Oct. 9
Pennwalt Issued Experimental Use Permit (GN) ... Jan. 12
(People) Viewpoint by Bruce Shank (ED) ... Apr. 8
(Pesticides) ICI is studying cause of clabber (NS) ... Mar. 103
(Pesticides) Experimental sprayer avoids handling risks (NS) ... Sep. 8
(Pesticide Labels) Inconsistent use exceptions settled (GN) ... Sep. 13
Pickseed to market two new ryegrasses (NS) ... Oct. 12
Prairie Hay also provide seed (NS) ... Sep. 8
Public Parks, Citizens Pay $16 each for use of (NF) ... Oct. 31
Public Parks by Bruce Shank (ED) ... Oct. 8
Purdue University: Three types of turf (NF) ... Jul. 32
(Purdue University) New tree wrap save time, labor (NS) ... Jul. 14
Pursley turf grass: warm climate sod specialists (FA) ... Aug. 22

R

Railroad Weed Control Rigths-of-way Contract Application (FA) ... Mar. 67
Ransomes, Wisconsin in new venture (NS) ... Oct. 10
(Reader Comment Card) Viewpoint by Bruck Shank (ED) ... Jan. 6
(Reader Comment Card) Viewpoint by Bruce Shank (ED) ... Feb. 8
(Reclamation) Field trips set for Canadian meeting (NS) ... Apr. 13
(Reclamation) Grants from coal tax to be distributed soon (NS) ... May 12
(Reclamation) Kentucky seminar presents latest technology (NS) ... Jun. 9
(Reclamation) Prairie Hay mulches also provide seed (NS) ... Sep. 8
(Reclamation) Sulfuric acid improves mine spoils (NS) ... Feb. 13
(Revegetation) Canyon Building site presents unique revegetation challenge (FA) ... Mar. 18
(Rights-of-way) UPDATE: Utility Rights of Way Little has changed since 1972 (NF) ... May 18
Rollins College: heavy use of eight acres (NF) ... Jul. 36

S

Scotts gains label for ataenius control (NS) ... Jul. 16
(Seed) Burning limits due this month in Oregon (NS) ... Apr. 12
(Shredders) Universities use shredders for renovation & composting (NF) ... Sep. 16
(Sod) Lofts establishes new sod division (NS) ... Oct. 12
Fixed Sod cost decreases as Maryland farm size rises (FA) ... Sep. 71
Costs and returns of Maryland Sod Production (FA) ... Oct. 47
(Sod) Nassau conference set for sod growers (NS) ... Jan. 43
Sod produces plant fewer acres in 1978 (NF) ... Aug. 19
Pacific Sod Farms: Trying twice as hard (NF) ... Aug. 28
Maryland notes changes in Sod Production since 1968 (FA) ... Aug. 33
(Soil) Flooding can cause damage from gas (NS) ... Feb. 73
The Science of Soils from New Turf Handbook by Wm. H. Daniel ... Jan. 26
Soil pasteurization is cheaper alternative (NS) ... Jul. 12
Soil Property Determinations with portable testers ... Nov. 20
Soil Test is key to proper fertilization (NF) ... Feb. 27
Solar Energy, rocks to heat greenhouses (NS) ... Sep. 10
(Spray Application) Selecting the proper spray application system by Ron Morris (FA) ... Jan. 14
(Sprayers) Experimental sprayer avoids handling risks (NS) ... Sep. 8
(Sprinkler) Operation and control of Sprinkler systems by James A. Watkins (FA) ... May 49
(Steel Piling) Superintendent Uses Steel Piling to solve Muskrat, Erosion Problems (FA) ... Jan. 36
Subcontractor is liable for site safety (LCN) ... Sep. 10

T

Tilapia fish has dual benefit (NS) ... Jul. 16
Toro announces low cost system (NS) ... Mar. 11
Texas A & M, Toro to study water use (NS) ... Sep. 13
(Trees) Decay factors in our urban forests ... No. 14
(Tree) Echo expands distribution facility (NS) ... Jan. 44
Trees, Efficiency can increase by pruning young (FA) ... Apr. 78
(Trees) Funds appropriated for chestnut blight (NS) ... Sep. 13
Ice Storms to add to spring business (NS) ... Apr. 13
(Trees) NAA Florida meeting has record attendance (NS) ... Apr. 15
(Trees) New trees wrap saves time, labor (NS) ... Jul. 14
(Tree) Red Oak tested for wilt resistance (NS) ... Feb. 13
(Tree) Sex Pheromone Traps Useful in Controlling Tree Borers (FA) ... May 22
(Tree) Top 20 trees derived from study (NS) ... Feb. 13
(Tree) Trends in tree planting on mine reclamation sites by Rufus Allen (FA) ... Jun. 42
(Tree Fertilization) Growth in tree fertilization linked to professional method (ED) ... Aug. 14
(Tree Fertilization) Species, Soil, location affect tree fertilization (FA) ... Oct. 16
(Tree Protection) Forest City Tree: Tree Protection Contract Application (FA) ... Mar. 59
(Trees) Restoring Fort Lauderdale's Tree Canopy ... Dec. 16
Trichem applies for fire ant productions (NS) ... Jan. 11
(Turf) Adjuvants may reduce crabgrass germination (NS) ... May 14
(Turf) Michigan firm publishes bibliography (NS) ... Mar. 11
(Turf) Mower manufacturers urge practical standards (NS) ... Jun. 9
(Turf) Musser Foundation takes funding action (NS) ... Mar. 12
(Turf) National federation is born in Texas (NS) ... Mar. 10
(Turf) Ohio research center to build rhizotron (NS) ... Jan. 12
(Turf) Purdue University three types of turf (NF) ... Jul. 32
(Turf) Scotts gains label for Ataenius control (NS) ... Jul. 16
(Turf) Snow didn't scare Ohio turf show goers (NS) ... Jan. 10
(Turf) Sod producers set for field day in Spokane (NS) ... May 12
(Turf) Still no pact on seed burning (NS) ... Jun. 12
(Turf) Symposium is set on wastewater irrigation (NS) ... Oct. 10
(Turf) Watson recommends drought measures (NS) ... Feb. 60
(Turf Care) Viewpoint by Bruce Shank (ED) ... Jul. 8
(Turf Expo) Southern California turf expo approaches (LCN) ... Sep. 10
Turf Fertilizers: The Trend & Basics (FA) ... Feb. 24
Turf Grass, Pursley, warm climate sod specialists (FA) ... Aug. 22

U

USGA reorganizes headquarters staff (NS) ... Feb. 12
Uniroyal question's EPA's MH test (GN) ... Apr. 15

V

Vegetation Management by Roger Funk (FA) ... Jan. 44
Vegetation Management by Roger Funk (FA) ... Feb. 62
Vegetation Management by Roger Funk (FA) ... Mar. 94
Vegetation Management by Roger Funk (FA) ... Apr. 80
Vegetation Management by Roger Funk (FA) ... May 62
Vegetation Management by Roger Funk (FA) ... Jun. 56
Velsicol indictment comes as shock (NS) ... Jan. 10
Velsicol, EPA reach chlordane agreement (GN) ... Apr. 15
Viewpoint by Bruce F. Shank (ED) ... May 6
Virginia turfgrass show draws 280 delegates (NS) ... May 63

W

(Weeds) SWSS probes cost, benefit of herbicides (NS) ... Feb. 73
(Weed Control) Guide to Weed Control for Managers of Turf by William H. Daniel (FA) ... Feb. 51
Wholesale Growers exceed one billion dollars in sales (FA) ... May 27
(Wholesale Growers) Conard Pyle Company: Growing with the roses (FA) ... May 30
(Wholesale Grower) Schmidt and Son: Propagators of Deciduous Trees (FA) ... May 38
(Wholesale Grower) Wight Nurseries: Specializing in Evergreens (FA) ... May 44
The Winter Grain Mite Winter Pest of Turf (FA) ... Feb. 22

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Authors

Allen, Rufus, "Trends in tree planting on mine reclamation sites" ..... Jun. 42
Bailey, Rod, "Keys to financing a business expansion" ..... Jul. 41
Blazer, R. E., "Mulches and Binding Agents to Achieve Erosion" ..... Jun. 22
Burdick, William, "Mistbolowers" ..... Jan. 19
Burnett, Naud, "Construction & Design" ..... Apr. 63
Bussey, C. W., "Comparison of Preemergent Herbicides for Crabgrass" ..... Feb. 34
Carter, Thomas, "Make Way For Diesels in Turf Care Equipment" ..... Jul. 42
Chapman, Douglas J., "Crab Apples Can Be Both Beautiful and Tough" ..... Mar. 27
Chapman, Douglas J., "Efficiency Can Increase By Pruning Young Trees" ..... Apr. 78
Clayton, G., "Greenbug Damage Found On Kentucky Bluegrass" ..... Oct. 26
Daniels, William H., "The Science of Soils From New Turf Handbook" ..... Jan. 26
Daniels, William H., "Guide to Weed Control For Managers Of Turf" ..... Feb. 51
Daniels, William H., "Managers's Guide To Warm Season Grasses" ..... Mar. 80
Engel, Ralph E., "Comparison of Preemergent Herbicides for Crabgrass" with C. W. Bussey ..... Feb. 34
Gilbert, Thomas J., "Maryland notes changes in Sod Production since 1968" ..... Aug. 33
Gilbert, Thomas J., "Fixed Sod Cost Decreases As Maryland Farm Size Rises" ..... Sep. 71
Gilbert, Thomas J., "Costs and Returns of Maryland Sod Production" ..... Oct. 47
Kay, Burgess L., "Tower Simulates Rainfall Provides Facts About Mulches" ..... Oct. 22
Lessley, Bill V., "Maryland Notes Changes In Sod Production Since 1968" ..... Aug. 33
Lessely, Billy V., "Costs And Returns Of Maryland Sod Production" ..... Oct. 47
Mackey, Dan, Restoring Fort Lauderdale's tree canopy ..... Dec. 16
Morris, Ron, "Selecting The Proper Spray Application System" ..... Jan. 14
Morris, Ron, "Pursley Turf Grass: Warm Climate Sod Specialists" ..... Aug. 22
Nielson, David G., "Sex Pheromone Traps Useful In Controlling Tree Borers" ..... May 22
Niemczyk, Dr. Harry D., "The Winter Grain Mite Winter Pest of Turf" ..... Feb. 22
Randell, R., "Greenburg Damage Found On Kentucky Bluegrass" ..... Oct. 26
Shank, Bruce F., "How To Improve The Landscape Contractor/Architect Relationship" ..... Jul. 20
Shank, Bruce F., "Growth In Tree Fertilization Linked To Professional Method" ..... Aug. 14
Shearman, Robert C., "Make Way For Diesels In Turf Equipment" ..... Jul. 48
Shigo, Alex, Dealing with decay factors in our urban forests ..... Nov. 14
Smith, Elton M., "Species, Soil, Location Affect Tree Fertilization" ..... Oct. 16
Street, J. R., "Greenburg Damage Found On Kentucky Bluegrass" ..... Oct. 26
Tadge, Charles H., "Helicopter Spraying" ..... Jan. 22
Watkins, James, A., "Sprinkler Equipment From Irrigation Manual" ..... Apr. 24
Watkins, James A., "Operation And Control Of Sprinkler Systems" ..... May 49
Webster, Arnold H., "Consultant Can Provide Technology" ..... Mar. 70

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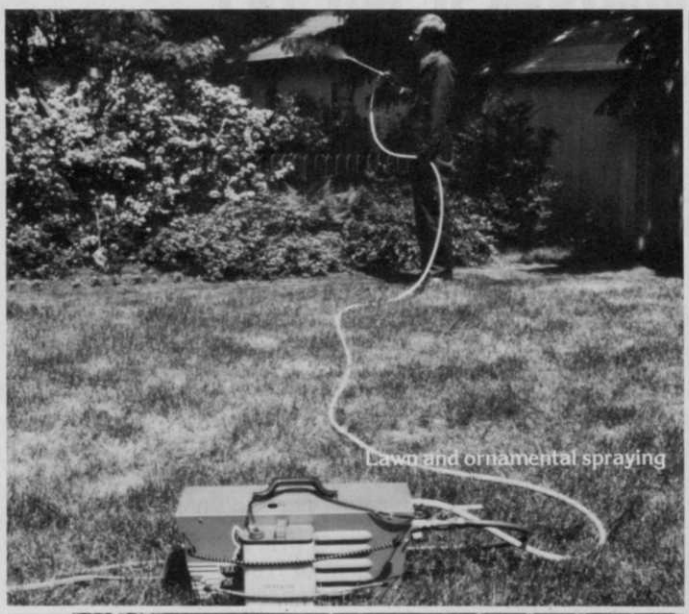
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VEGETATION MANAGEMENT

By Roger Funk, Ph.D., Davey Tree Expert Co., Kent, Ohio

Q: *Does wiltproofing help evergreens survive the winter?*

A: The use of an antitranspirant will decrease the amount of water lost through the foliage and help prevent winter desiccation. Unfortunately, in extremely cold or windy conditions the margin of safety provided by an antitranspirant application may not be sufficient to noticeably increase protection. Test the materials to determine their effectiveness in your particular situation.

Q: *Recently I became grounds superintendent for a county shrine and wildlife sanctuary. By all appearances, the biggest challenge will be how to rid, if possible, its 130 acres of Japanese honeysuckle. A third of the property is in wooded trails, the rest in lawns, buildings and fields.*

The aggressive semi-evergreen vine has smothered beds of native wildflowers, discouraged the development of native trees and shrubs, and shrouded many established border plantings. It's even found in open fields where mowers can't get low enough to cut it.

I've heard it will eventually cycle itself out; maybe so, but by then there will be no other ground cover left to take its place.

My question is, how best to control or get rid of the weed?

A: Some Amitrole formulations are labeled for honeysuckle control as foliage sprays. Check the product's label for specific information on timing, rate of application and precautions.

Q: *Can I store my liquid pesticides in an unheated warehouse if the temperatures get below freezing?*

A: Although heated storage is preferred for pesticides, some can be subjected to freezing temperatures and retain their effectiveness.

Discoloration, settling or crystal formation does not necessarily mean that the material has been chemically altered unless it cannot be returned to its normal state with agitation. Contact the manufacturer(s) for specific recommendations for each pesticide.

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  Michigan State cold tolerance tests ranked Manhattan as one of the most cold tolerant of all the new turf type perennial ryegrasses tested.
- **Cutability . . .**
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PROSCAPE

By Michael Hurdzan, Ph.D., golf course designer and consultant

Q. *I would like to know if there is any new information on the cure or control of "Spring Dead Spot" on the golf course greens? . . . B.M., Pendleton, SC*

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A. At long last — yes. At a workshop on southern turfgrass diseases during the National Phytopathological Meeting held in November 1978, Dr. Leon Lucas, of North Carolina State University, reported the preliminary research has shown Benomyl may control Spring Dead Spot. His early findings indicated that 5-10 oz/1000 ft^2 of Tersan 1991® applied in October and November gave 0% incidence of the disease while check plots had 20% infection. Dr. Lucas has also found fair control is possible by using PCNB (Terraclor®) at 10 oz/1000 ft^2 when applied in October and November or about the time that Bermudagrass goes dormant.

As a normal maintenance practice to reduce Spring Dead Spot occurrence, he suggests to avoid heavy nitrogen rates in the late summer and fall on Bermuda.

Although Spring Dead Spot is so devastating and widespread in the south, it has only been recently that active research on this problem could be economically justified. But now that there is money to match the interest in this disease, more information should be forthcoming.

On May 15, 16 and 17, 1979, the Ohio State University, The Ohio Agricultural Research and Development Center and Chem-Lawn Corporation will jointly sponsor a symposium on turfgrass diseases, to be held at the University Holiday Inn in Columbus, Ohio. Leading turfgrass disease specialists from the United States and Canada have agreed to participate in this event. Anyone interested in current problems associated with control of turfgrass diseases is welcome to attend and should benefit from the speakers' comments. The proceedings of the meeting will be published and should serve as a valuable reference on turfgrass diseases. For further information about the program, address your inquiry to:
A Symposium of Turfgrass Diseases 1979
2865 East Orange Road
Galena, Ohio 43021
or call:
Dr. P.O. Larsen, Ph.D. (614) 422-6987
Dr. B. G. Joyner, Ph.D. (614) 885-9588
This is a good opportunity to meet Dr. Lucas and other noted researchers in Plant Pathology.

Q: *Since nemagon is no longer available, what will a golf course combat nematodes with? J.J., Avon Park, FL*

A: At this point in time no one can give any definitive answers concerning the fate of Nemagon®. Rumor has it that it will continue to be available for turf application, but only time will tell. (We could try the governmental approach of taxing them to death or else feed them saccharin and let them die of cancer.) **WTT**

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AERIAL BASKET, 1968 Stratotower, 55 ft., insulated 2 man bucket. Equipped for hydraulic tools. 509 925-4553. Central Nursery, R3, Box 2070, Ellensburg, Wa. 98926.

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EVENTS

Maryland Turfgrass Council Turfgrass '79, Baltimore Hilton, Charles Center, Baltimore, MD, **Jan. 8-10.** Contact: Charles Darrah, Dept. of Agronomy, U. of MD, College Park, MD 20742, 301/454-3715.

17th Nebraska Turfgrass Conference, Nebraska Center, University of Nebraska, Lincoln, Neb., **Jan. 8-10, 1979.** Contact: Dr. R. C. Shearman, Turfgrass Specialist, 105 Plant Industry Bldg., University of Nebraska, Lincoln, Neb., 68583.

48th Annual Winter School for Turf Managers University of Massachusetts, Amherst, Ma., **Jan. 8-Mar. 2, 1979.** Call: 413/545-2353.

The Irrigation Association Short Course Program, Center Pivot Irrigation, Denver, Colorado, **Jan. 9-11, 1979.** Call: 301/871-1200.

University of Florida Ag Research Ctr. Field Day, Ft. Lauderdale, FL, **Jan. 9, 1979.** Call: 305/581-8010.

Landscape Design Short Courses, Fisher Auditorium, OARDC, Wooster, Ohio, **Jan. 10-12, 1979.** Contact: Fred K. Buscher, Area Extension Center, OARDC, Wooster, Ohio, 44691.

New Hampshire Turf Seminar, Sheraton-Wayfarer Motor Inn, Bedford, NH, **Jan. 11-12.** Contact: George Esters, Dept. of Plant Science, University of NH, Durham, NH 03824.

Southeastern Pennsylvania Turf School and Trade Show, Westover Country Club, Jeffersonville, PA, **Jan. 16-17, 1979.** Contact: Wm. H. White, SE Corner Broad and Grange St., Philadelphia, PA, 19141.

Annual Kansas Christmas Tree Growers Winter Meeting, Holiday Inn, Manhattan, KS, **Jan. 19-21, 1979.** Contact: Shryll Hoffman, Rt. 1, Alta Vista, KS, 66834.

The Irrigation Association Short Course Program, Pumps and Pump Controls, St. Louis, Mo., **Jan. 23-25, 1979.** Call: 301/871-1200.

Southern Weed Science Society 32nd Annual Meeting, Sheraton-Biltmore Hotel, Atlanta, GA, **Jan. 23-25, 1979.** Contact: SWSS, Texas Agricultural Experiment Station, Route 3, Lubbock, TX 79401.

Western Pennsylvania Turf & Grounds Maintenance School-Trade Show, Howard Johnson Motor Lodge, Monroeville, PA, **Jan. 23-25, 1979.** Contact: Phil Sellers, 311 Jones Law Bldg. Annex, 331 Ross st., Pittsburgh, PA, 15219, or, Art Wick, P.O. Box 362, Sewickley, PA, 15143.

Massachusetts Horticultural Congress, Howard Johnson's 57 Hotel, Boston, Mass., **Jan. 24-25, 1979.** Contact: Deborah Fanning, coordinator, 715 Boylston Street, Boston, Mass., 02116, phone: 617/266-6800.

Mid-Atlantic Agricultural Chemical & Equipment Trade Show, Richmond Arena, Richmond, Va., **Jan. 24-25, 1979.** Contact: N. D. Thomsen, Publicity Chairman, Va. Pesticide Association, Rt. 1, Box 126, Prov. Forge, Va., 23140.

Virginia Turfgrass Conference, Conference Center, Colonial Williamsburg, Williamsburg, Va., **Jan. 24-25, 1979.** Contact: J. F. Shoulders, Dept. of Agronomy, Virginia Polytechnic Institute and State University, Blacksburg, Va., 24061.

15th Annual Northern California Turfgrass & Environmental Landscape Exposition, San Mateo County Fairgrounds, Hall of Flowers, San Mateo, CA, **Jan. 24-25, 1979.** Contact: NCTC, P.O. Box 268, Lafayette, CA 94549, 415/283-6162.

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Mathews Co. 44
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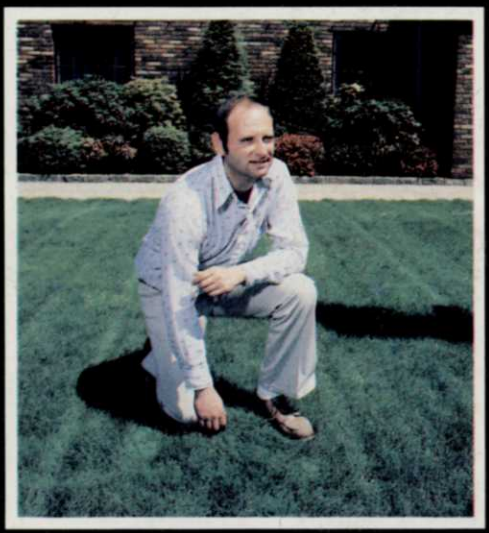

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Lawn-A-Mat dealer, Garden City Park, Long Island, New York. . .
one of the largest independent lawn care dealers, servicing over 2000 lawns.

"I make sure Baron is in every pound of grass seed we use. Last year it amounted to 80,000 pounds of Lofts special lawn seed mixtures. If all goes well, I'll order even more this year.

"Why do I insist on Baron? Because my customers expect me to compensate for everything, from the weather to their own mistakes. Some homeowners may let their lawn grow to six or eight inches, then cut it to three-quarters of an inch! Or they'll forget to water their grass during a drought, or use their lawn for a baseball field. With all that abuse, they still expect a good lawn.

"I need a 'customer-proof' grass seed mixture. So I specify Baron, Yorktown and other top quality Lofts grasses in my special mixture. I get a lush, green color, an excellent root system and the best resistance to leaf spot I've ever seen. Guess that's why I get better than 85% renewals every year.

"One last thing, I really depend on my suppliers for delivery and service. I've dealt with the Lofts people for 15 years and they haven't failed me yet. That's very important to me."

Lofts Pedigreed Seed, Inc.
LOFTS
Bound Brook, N.J. 08805/(201) 356-8700

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